

Weston Estates Subdivision

LEVEL 2 TRAFFIC IMPACT STUDY

Project Location: Parcel 2697-164-00-050
Fruita, CO

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Report Date: January 15, 2021



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Weston Estates Subdivision, Fruita, CO
Level 2 Traffic Impact Study

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1. Introduction

APEX Consulting Engineers, LLC prepared this Level 2 Traffic Impact Study (Study) for the proposed Weston Estates Subdivision (Project), located in Fruita, CO. The following sections describe the Project, traffic volumes, auxiliary turn lane assessments, access spacing, and sight distance evaluation for this intersection.

2. Project Location and Description

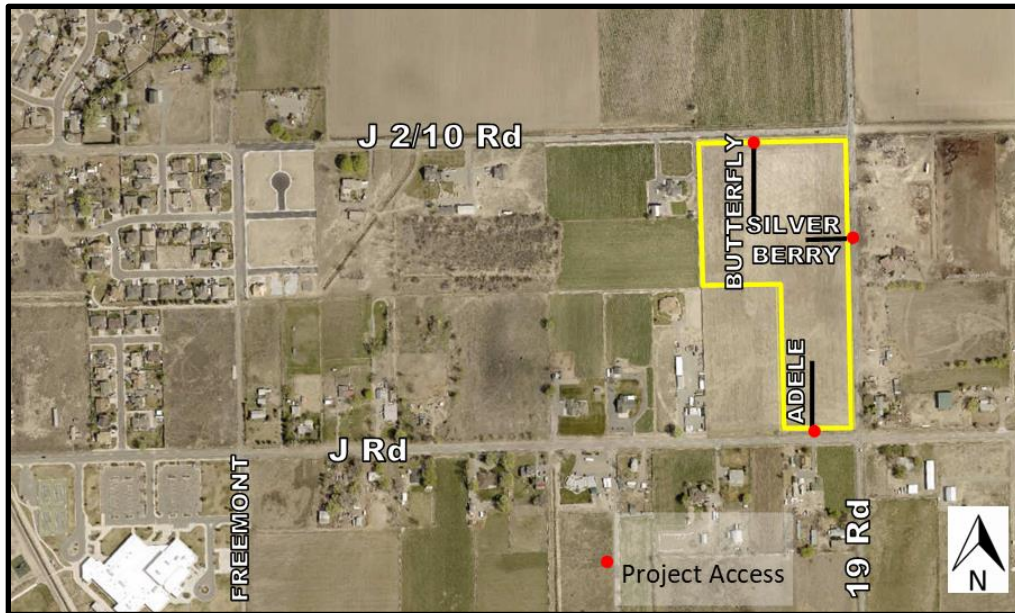
The Project is a proposed 126-unit single family, detached housing subdivision located at Mesa County Parcel 2697-164-00-050. As shown in Figures 1 and 2, the Project will be located on the west side of 19 Road, between J and J 2/10 Roads.

As shown in Figure 2, the Project will include three new access points to the roadway network

Figure 1 - Site Location Map



Figure 2 – Project Site Access Locations



3. Trip Generation & Distribution

3.1 Trip Generation

Land Use Code 210, Single-Family Detached Housing, from the ITE Trip Generation Manual 10th Edition, was used in trip generation calculations. In all peak hour cases, the higher of “either peak hour of roadway” or “peak hour of generator” is used, providing a conservative assessment. In this case, peak hour of generator is used. Trip generation traffic calculations from the ITETripGen Web-based App are attached in Appendix A. Table 1 provides the Project peak hour traffic. ITE units for this land use are dwelling units (du).

Table 1 – Project Peak Hour Traffic Volumes

Period	AM	PM
Entry	26	84
Exit	74	48
TOTAL	100	132

3.2 Trip Reduction Factors

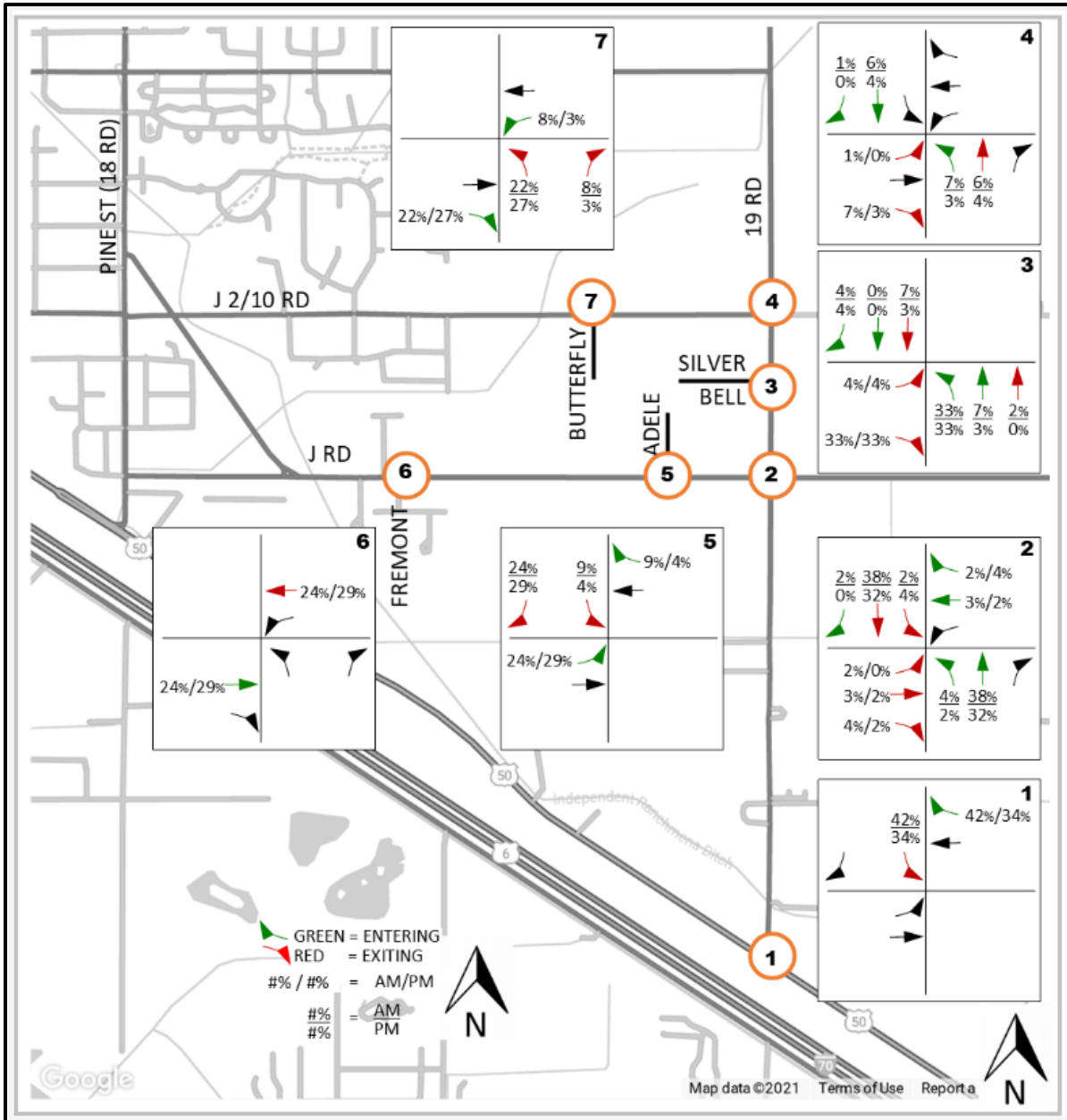
An internal capture trip reduction factor was not used, due to the single-use nature of the Project. Additionally, pass-by capture factors were also not used.

4. Trip Distribution & Assignment

4.1 Determination of Trip Distribution

Project trip distribution is shown in Figure 3. Calculations are included in Appendix B.

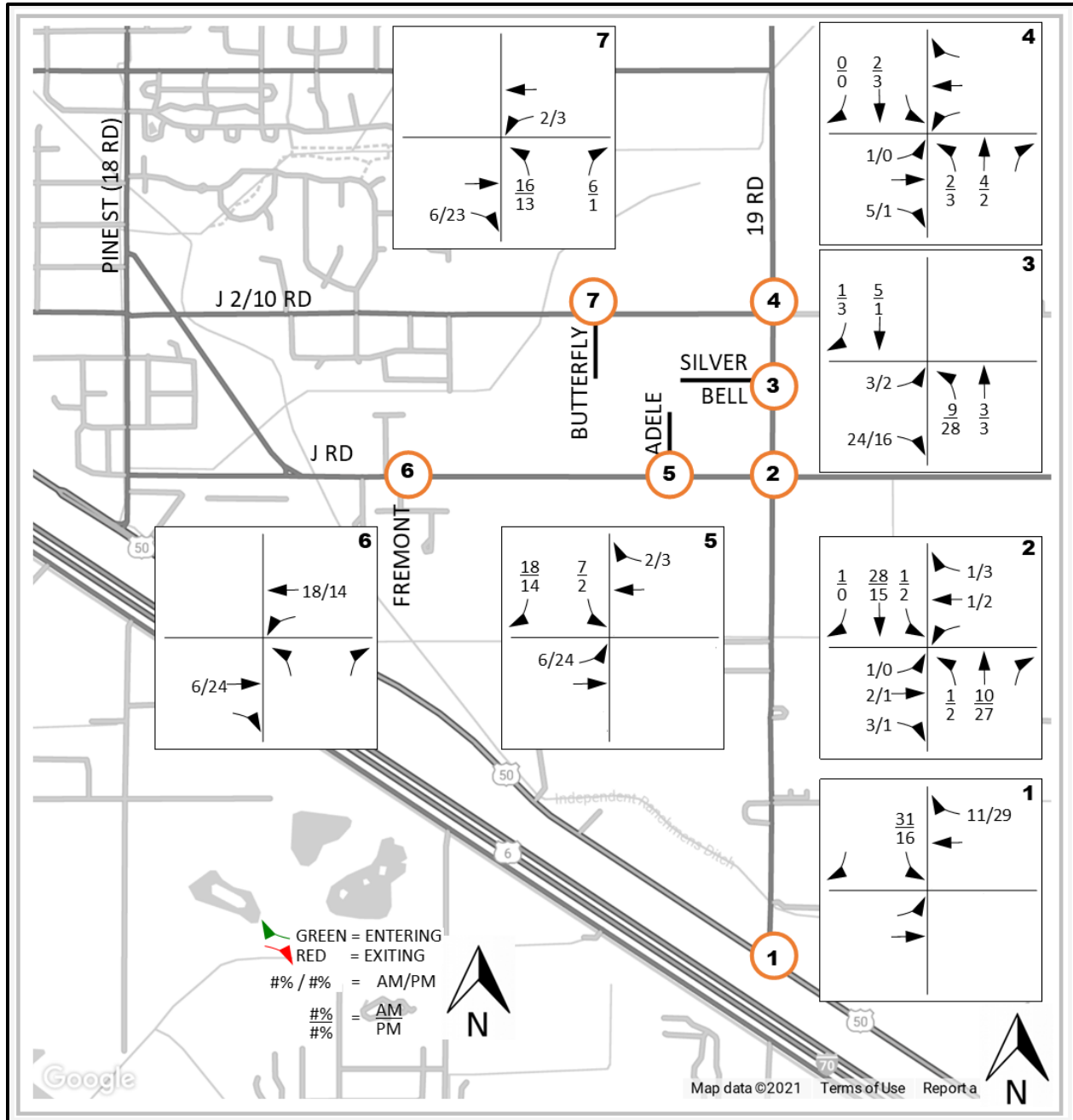
Figure 3 – Project Trip Distribution



4.2 Assignment of Project Traffic

Project traffic determined from the trip generation calculation is assigned to the existing traffic network using the distributions from Figure 4. The resulting Project trip assignment is shown in Figure 4.

Figure 4 – Project Trip Assignment Phase 1



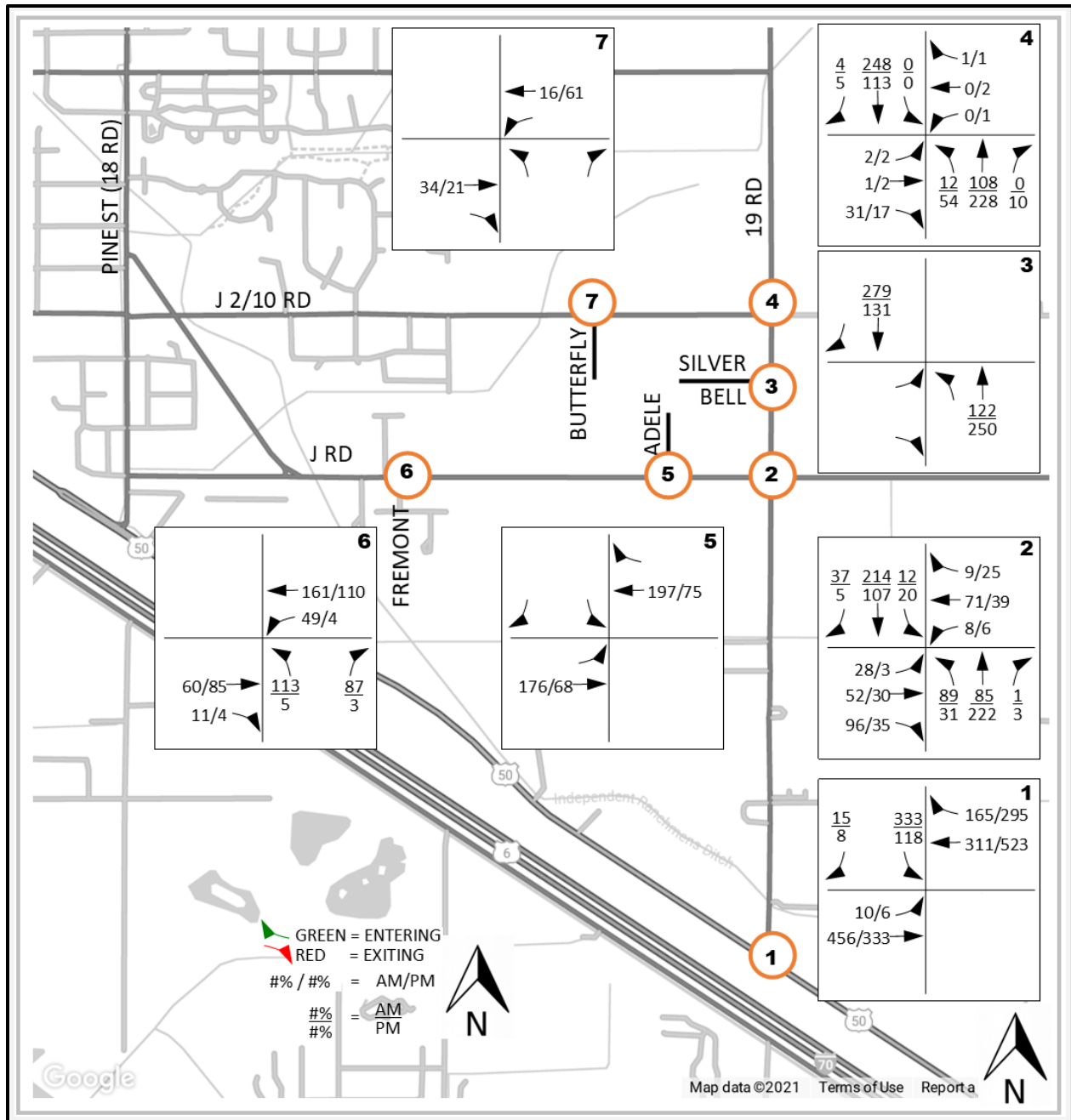
5. Existing & Future Traffic Volumes

Peak hour intersection turning movement counts were conducted at the following intersections in November 11-12, 2020:

- SH 6 & 19 Road
- 19 Rd & J Rd
- 19 Rd & J 2/10 Rd
- J Rd & Fremont

Peak hour existing peak hour traffic volumes are shown in Figure 5.

Figure 5 – Existing Peak Hour Traffic
 (from counts 11/11-11/12/2020)



6. Study Years Traffic Volumes

Future background traffic is determined in this section. The Project is expected to take 5 years to complete.

The study years are 2025, 2030 and 2050. The Grand Valley Metropolitan Planning Organization (GVMPO) provided traffic volumes from the Regional Travel Demand Model (RTDM), base 2010 model + future 2040, and are the basis for the following road segment growth factors:

Table 2 – Road Segment Growth

Road	Segment	ADT		Period Growth Factor	Avg. Annual Growth Rate	4 - year growth factor (2021-2025)	24 - year growth factor (2021-2045)
		2010	2040				
SH 50	W of 19 Rd	10	13	1.300	0.88	1.036	1.234
SH 50	E of 19 Rd	13	15	1.154	0.48	1.019	1.122
19 Road	S of J Rd	5	11	2.200	2.66	1.111	1.878
19 Road	Between J & K Rd	4	10	2.500	3.10	1.130	2.081
J Road	West of 19 Rd	1	4	4.000	4.73	1.203	3.032
J Road	East of 19 Rd	Use J Road west of 19 Road					
J.2 Road		Use J Road west of 19 Road					

The RTDM does not provide data for J 2/10 Road, so the Study uses J Road data, which is a conservative estimate of the less direct J 2/10 road.

Road segment growth data is summarized in Appendix D. These growth factors were used to determine future peak hour background traffic volumes, as shown in the peak hour traffic calculations provided in Appendix E.

7. Study Period Volumes

Total traffic volumes consist of future background traffic volumes plus Project trips. The following figures present background and total peak hour traffic for the study periods. Calculations are included in Appendix E.

Figure 6 – Background Peak Hour Future Traffic (Year 2025)

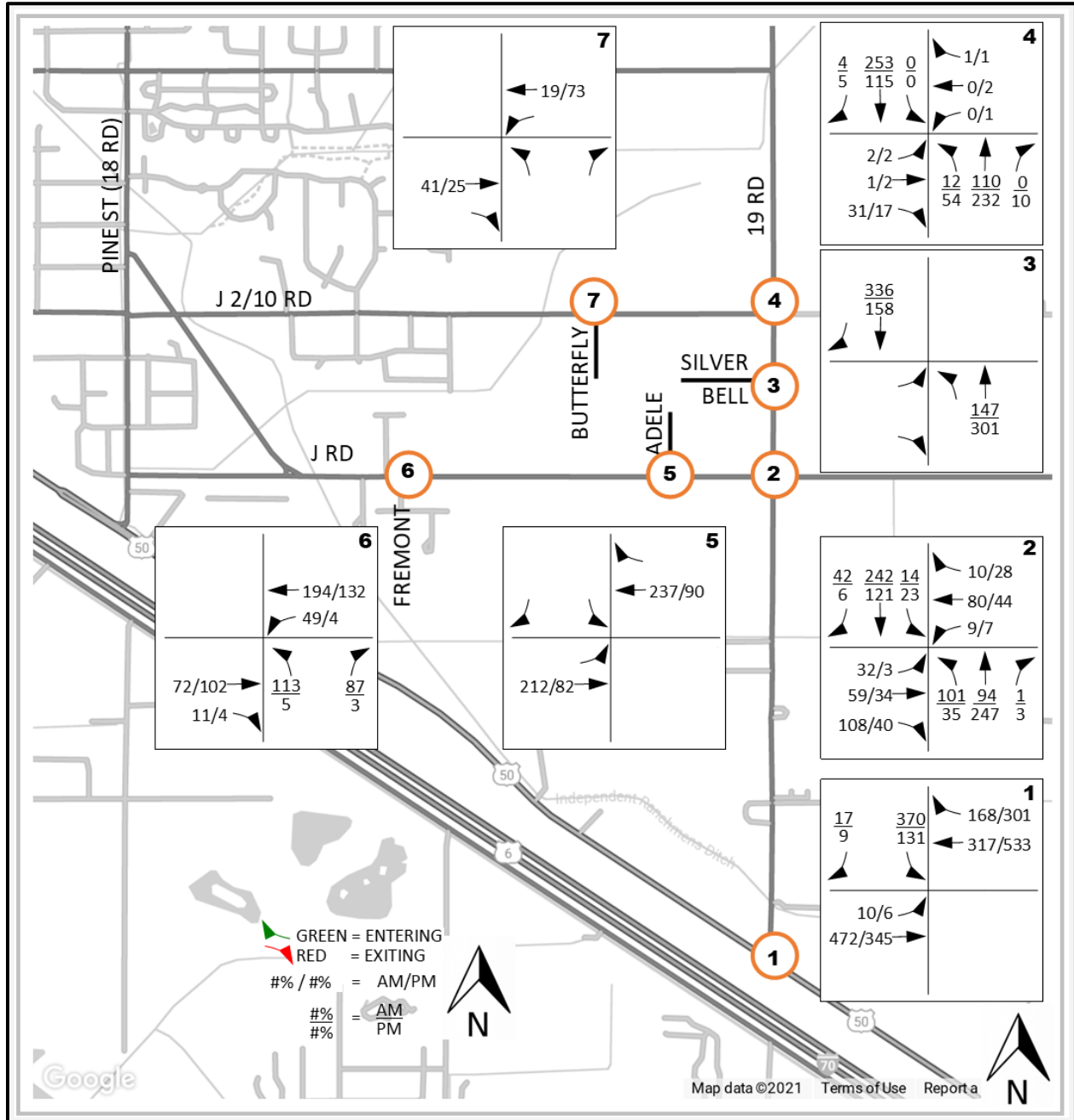
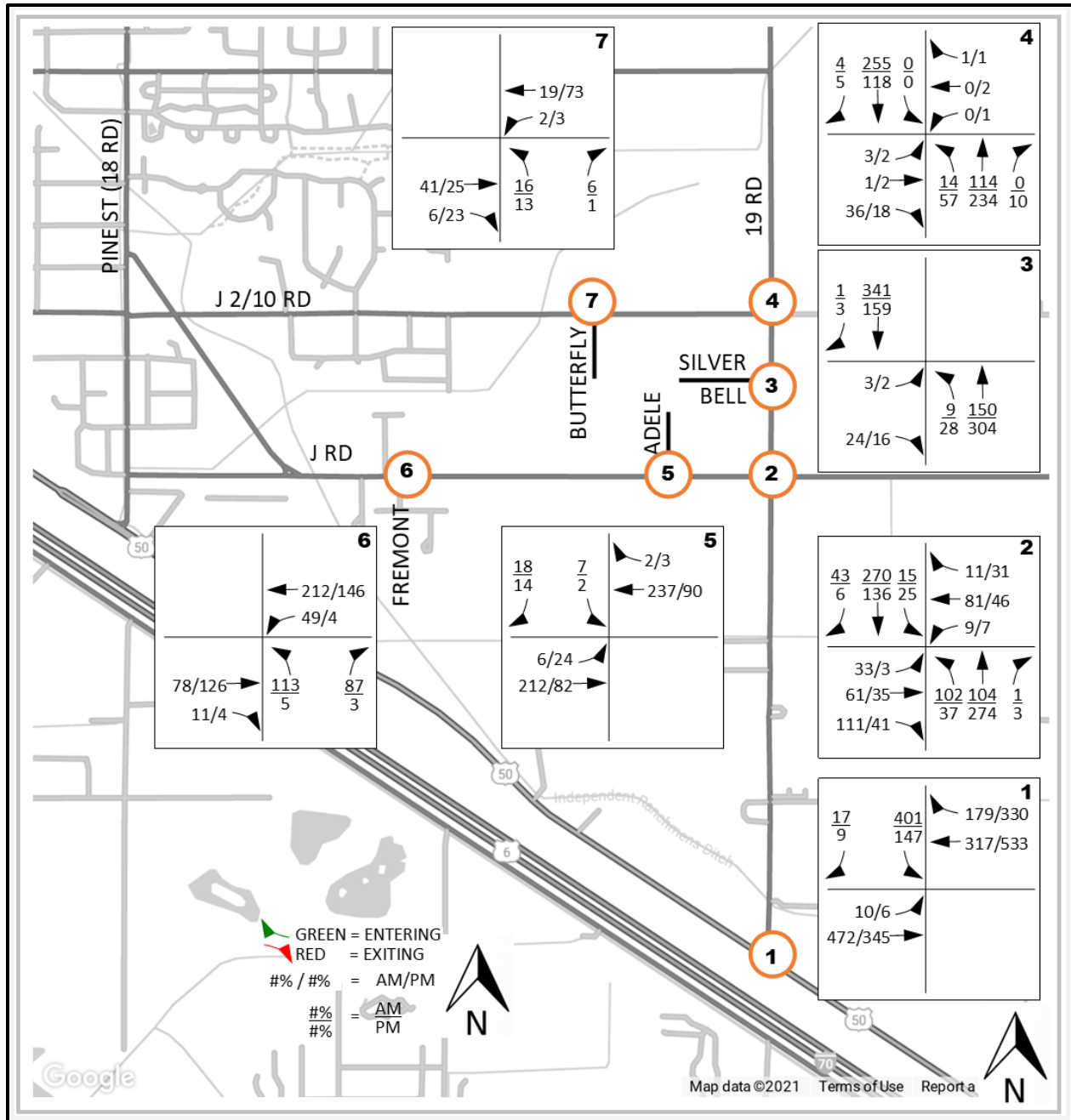


Figure 7 – Total Peak Hour Future Traffic (Year 2025)



8. Study Period Volumes (2045)

Figures 8 and 9 provide background and total traffic at Project completion.

Figure 8 – Background Peak Hour Future Traffic (Year 2045)

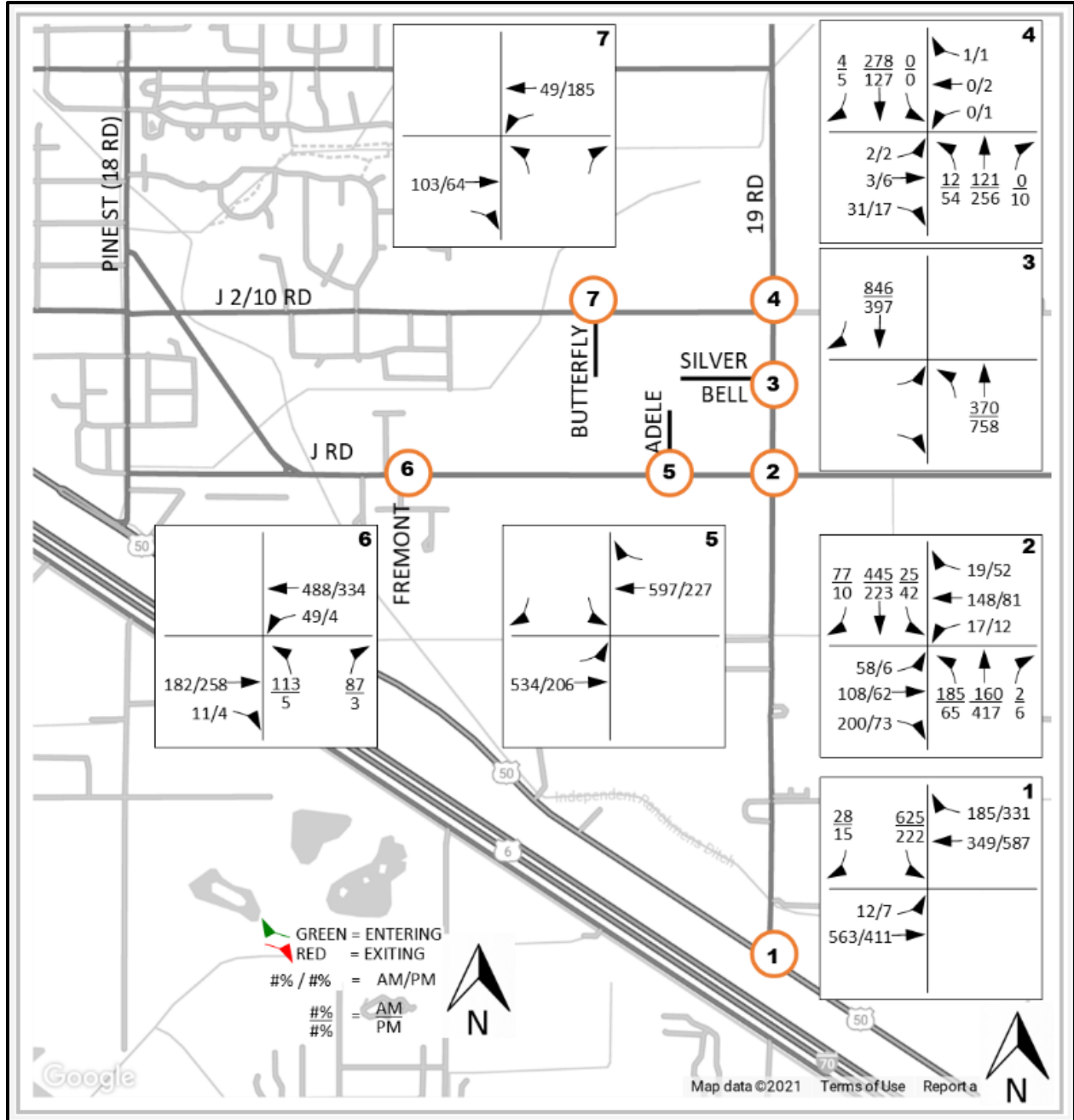
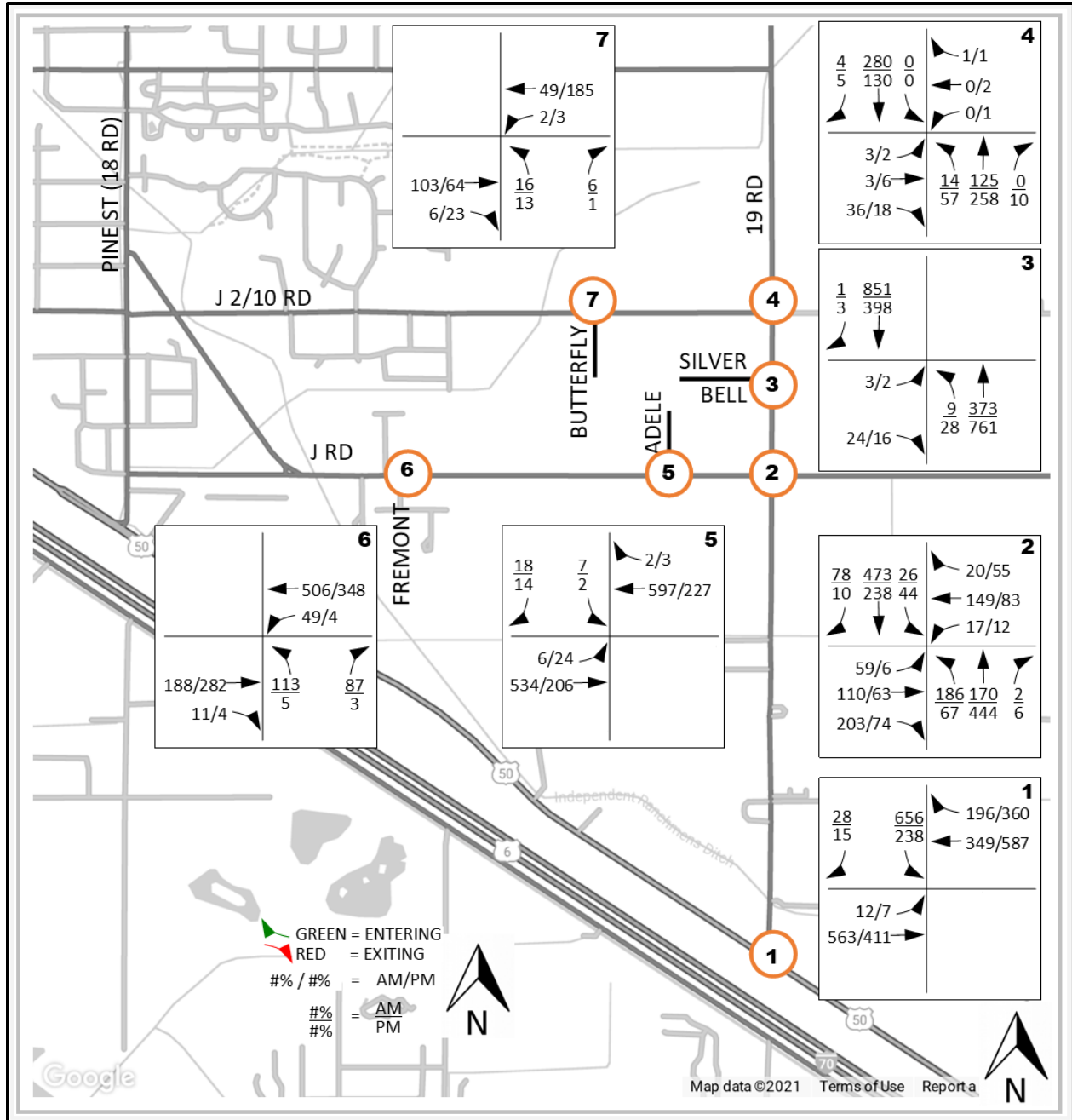


Figure 9 – Total Peak Hour Future Traffic (Year 2045)



9. Auxiliary Turn Lane Evaluation

The need for auxiliary lanes was based on the turn lane warrants listed in the Mesa County Transportation Engineering Design Standards (TEDS). The following table shows the data and criteria necessary to identify the need for exclusive right-turn and left-turn deceleration lanes at the intersections in the Study area.

Table 3 – Comparison of Turning Volumes to Turn Lane Requirements

Intersection	Year	Deceleration Movement	Speed Limit	Highest Period	Turning (vph)	Traffic Volumes Through (vph)		Threshold Turning Volumes	Auxiliary Lane Req'd
						Direction	Through		
2 19 Rd & J Rd	2020	SB Right	45	AM	37	SB	214	17	YES
		EB Right	45	AM	96	EB	52	Note 1	NO
	2025	SB Right	45	AM	43	SB	270	84	YES
		EB Right	45	AM	111	NB	61	Note 1	NO
	2045	SB Right	45	AM	78	SB	473	39	YES
		EB Right	45	AM	203	NB	110	Note 1	YES
3 19 Rd & Silver Bell	2025	NB Left	45	PM	28	WB	304	12	NO
		SB Right	45	PM	3	WB	159	Note 1	NO
	2045	NB Left	45	PM	28	NB	761	13	YES
		SB Right	45	PM	3	SB	398	Note 1	NO
4 19 Rd & J 2/10 Rd	2025	NB Left	35	PM	57	NB	234	12	YES
		EB Right	35	AM	36	EB	1	Note 1	NO
	2045	NB Left	35	PM	57	NB	258	12	YES
		EB Right	35	AM	36	EB	3	Note 1	NO
5 J Rd & Adele	2025	EB Left	25	PM	24	EB	82	Note 2	NO
		WB Right	25	PM	3	WB	90	Note 1	NO
	2045	EB Left	25	PM	24	EB	206	Note 1	NO
		WB Right	25	PM	3	WB	227	14	NO
7 J 2/10 Rd & Butterfly	2025	EB Right	25	PM	23	EB	25	Note 1	NO
		WB Left	35	PM	3	WB	73	Note 2	NO
	2045	EB Right	25	PM	23	EB	64	Note 1	NO
		WB Left	35	PM	3	WB	185	14	NO

NOTES:

1. Turn lanes area generally not required when turning volumes are less than 120 and through volumes are less than 300 DHV at 45 mph.
2. Turn lanes generally not required when through volumes are less than 100 DHV.

SH 6 and 19 Road were not evaluated as the intersection is signalized, has auxiliary lanes for SB right, NB Left and WB-SB auxiliary lanes.

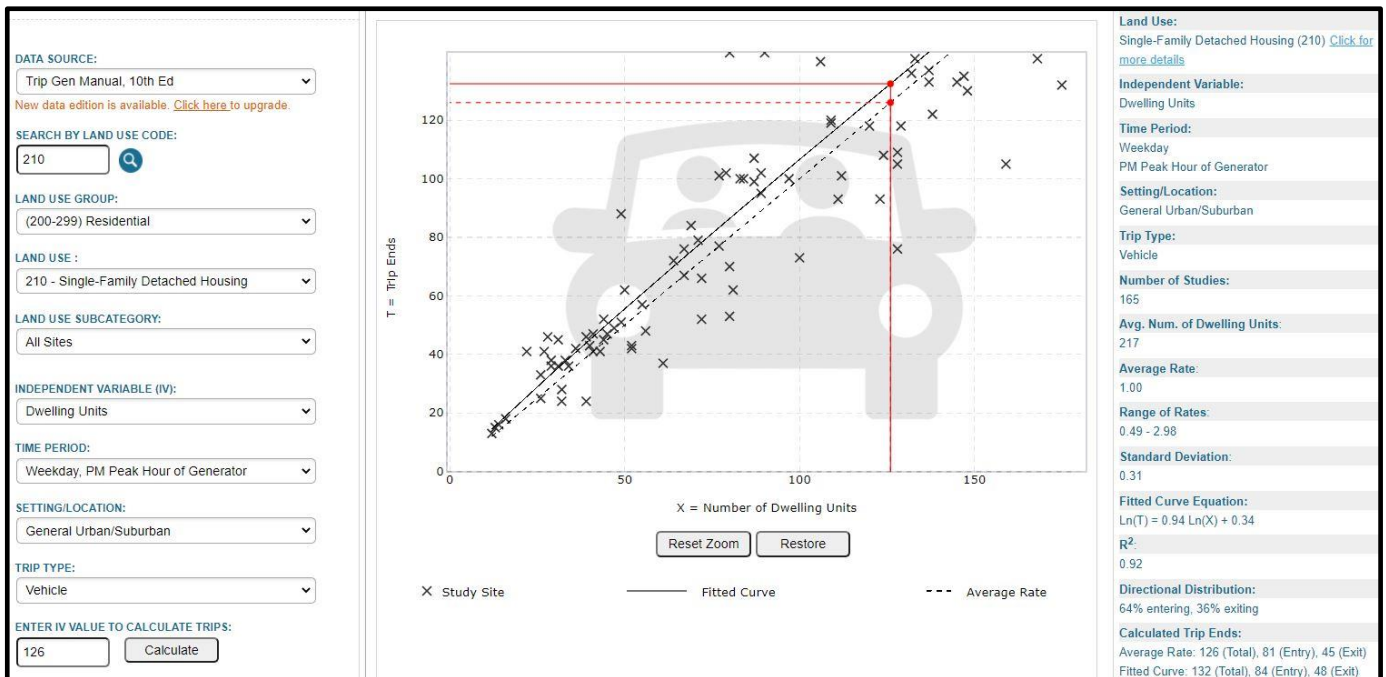
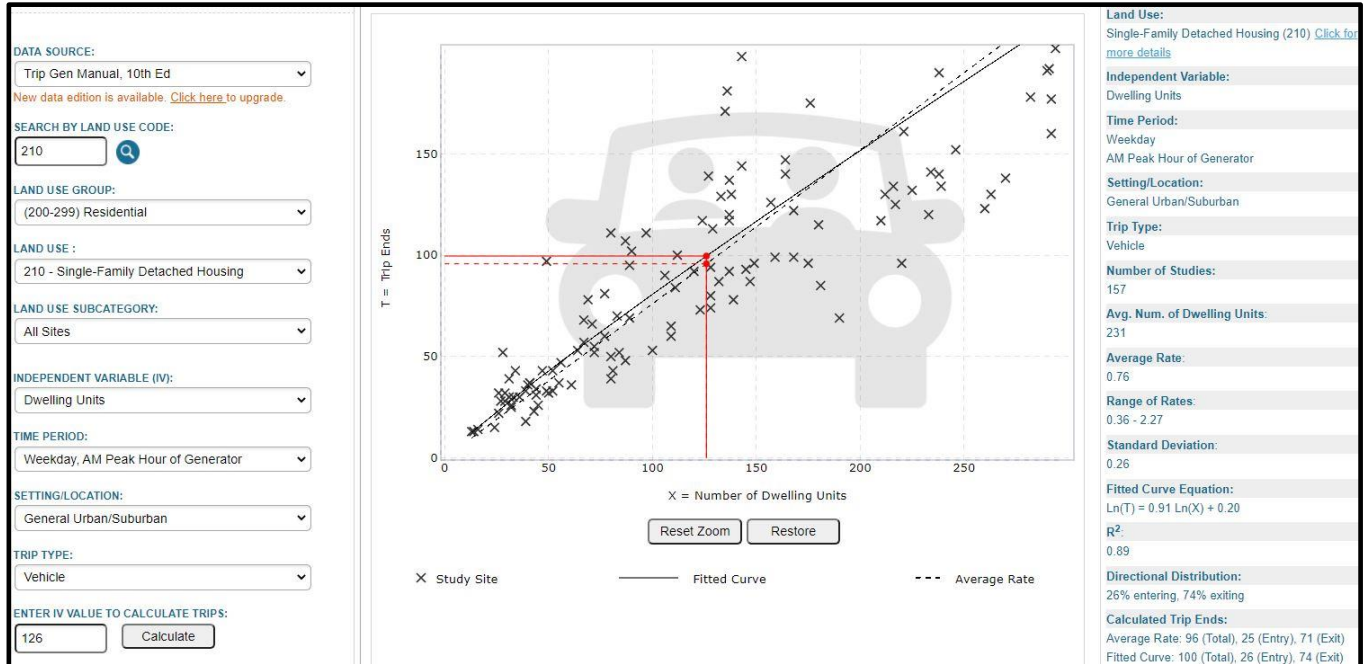
10. Intersection Sight Distances

Sight distances at the proposed access points are currently clear and unobstructed for distances greater than the 585' (the longest required sight distance for 45 mph roadways) in all directions.

11. Recommendations

- Existing conditions at the intersection of 19 Road and J Road warrant a northbound left turn lane. The intersection is a 4-way stop controlled intersection and the addition of a dedicated left turn lane would be confusing to users. It is recommended that construction of any left turn auxiliary lanes be deferred until the intersection is signalized or further improved with a traffic circle.
- A northbound left turn lane at the intersection of 19 Rd & Silverbell Drive is warranted sometime after completion of the project and before 2045 due to increasing traffic volumes on 19 Road. The lane is not warranted at the time of completion of the project.
- Existing conditions at the intersection of 19 Road and J 2/10 warrant an auxiliary left turn deceleration lane.

Appendix A – Project Trip Generation



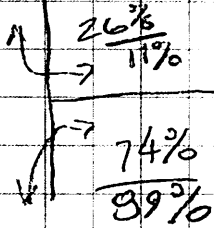
PROJECT: WESTON ESTATES

DATE: 12-2-2020

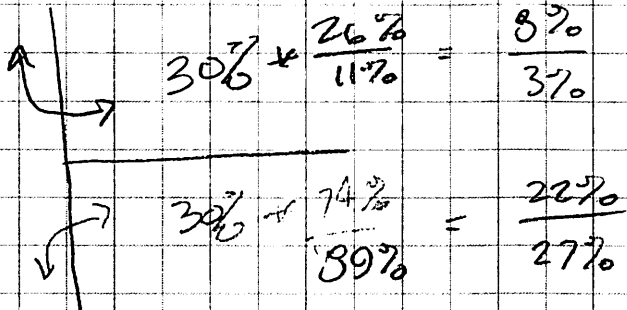
BUTTERFLY DRIVE - ZONE A

1. USE N/S DIST. @ BUTTERFLY DRIVE FROM STANDARD

N/S



2. APPLY DIST. TO ZONE (A) WHICH CONTAINS 30% OF DVS

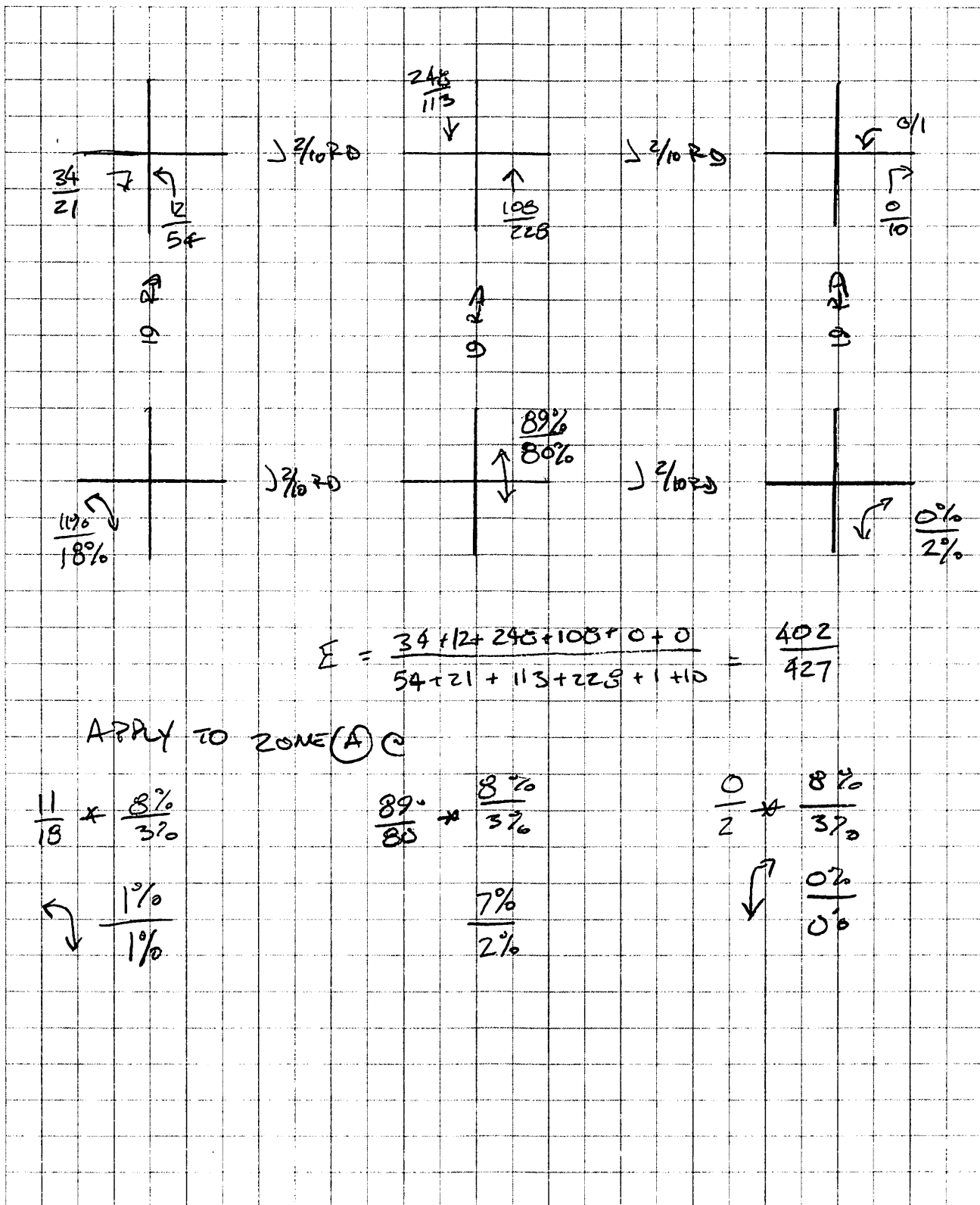




PROJECT: WESTON

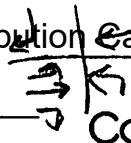
DATE: _____

DIS FOR BUTTERFLY

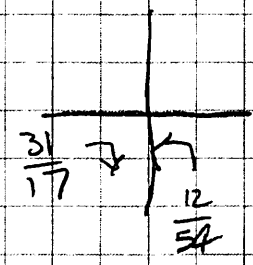
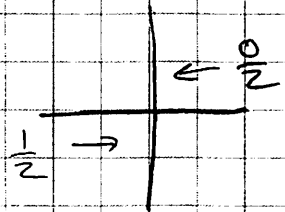
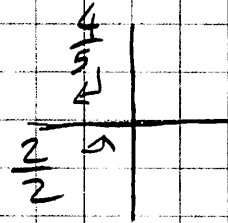


PROJECT: WESTON

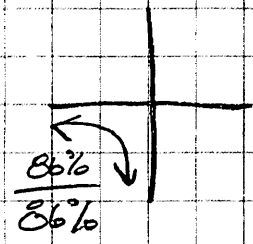
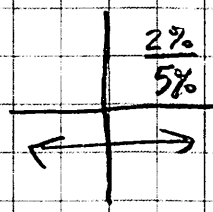
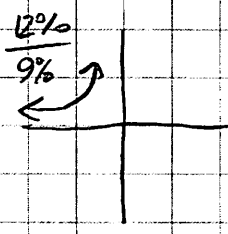
DATE: 12-3



1710 & 19 DIST OF EB PROD FROM BUTTERFLY



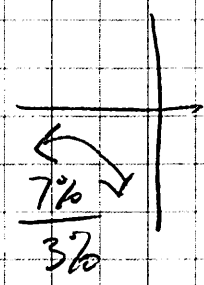
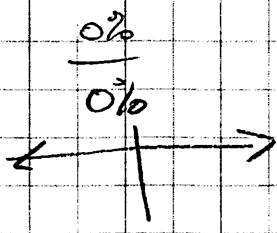
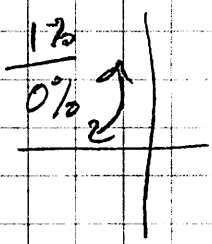
$$\Sigma = \frac{2+4+1+0+31+12}{2+5+2+2+17+54} = \frac{50}{82}$$



$$\frac{12\%}{9\%} \approx \frac{8}{3}$$

$$\frac{2\%}{5\%} \approx \frac{100}{25}$$

$$\frac{86\%}{86\%} \approx \frac{8}{3}$$



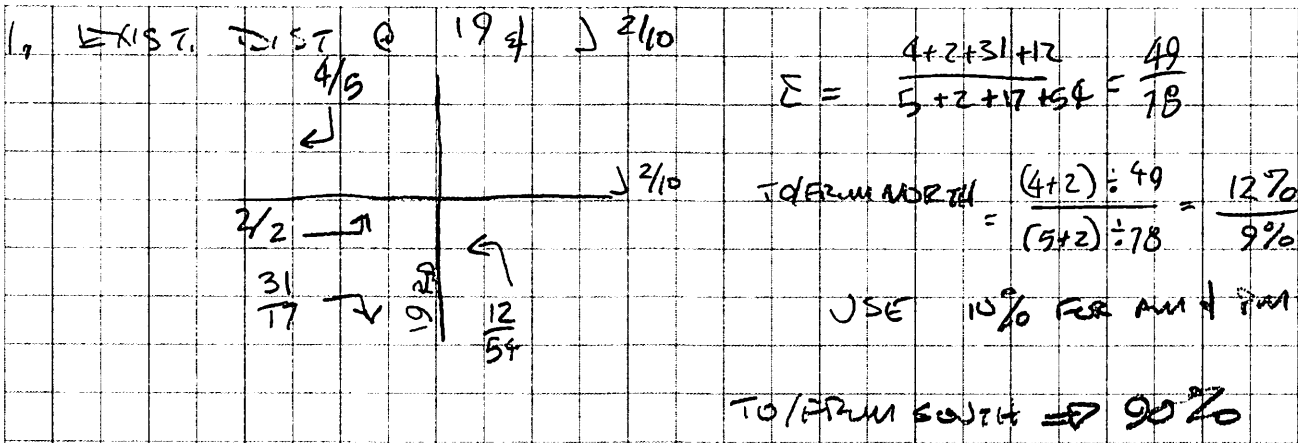
PROJECT: WESTONESTATE

DATE: 12-2-2020

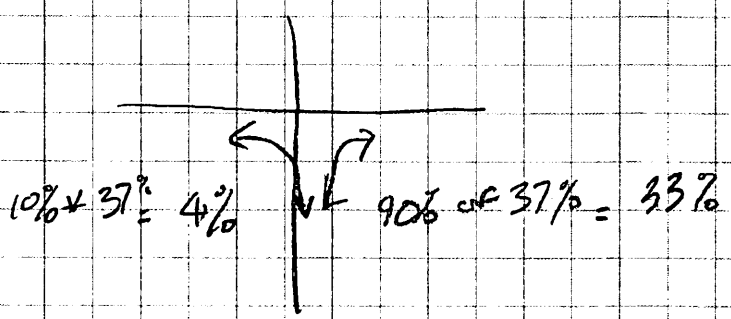
APEX

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DISTRIBUTION @ SILVER BERRY & 19 RD
FROM 19 & 210 ROADS



2. APPLY DIST. FROM 1. TO ZONE B @ 37% OF DIS



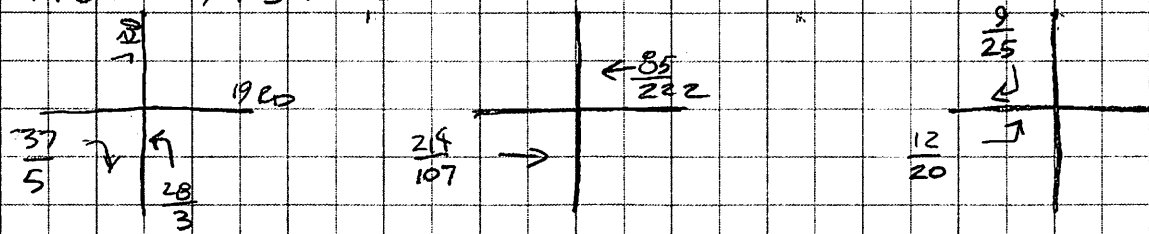
PROJECT: WESCON

DATE: 12-3-2020

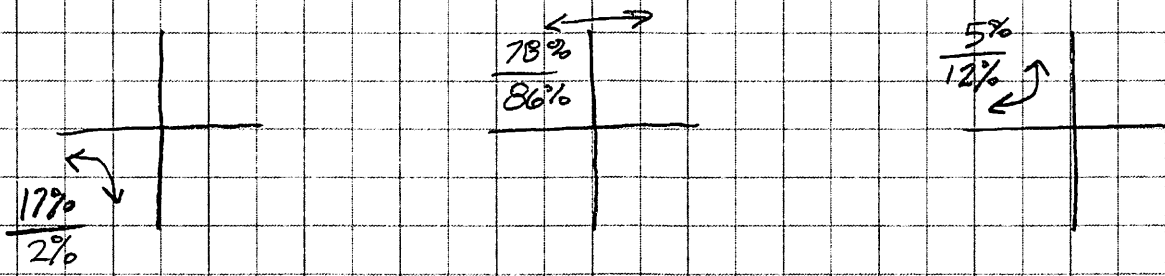
19 & J ROAD DISTRIBUTIONS FROM DIFF DIRECTIONS

NORTH
 ↓ ↓ ↓ ↓ ↓
 ← →
 19

1. START AT SILVER BERRY & WORK BACK FROM 19 & J ROAD



TOTAL = $\frac{37 + 28 + 214 + 85 + 12 + 9}{5 + 3 + 107 + 222 + 20 + 25} = \frac{385}{382}$



DISTRIBUTE N/S TRAFFIC ON 19 ROAD @ $\frac{41\%}{36\%}$

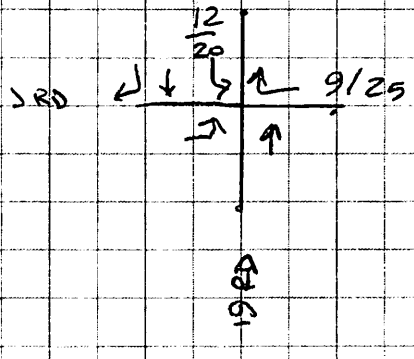
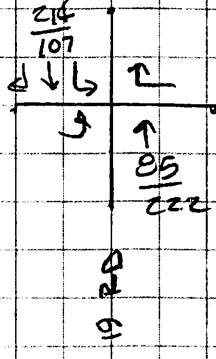
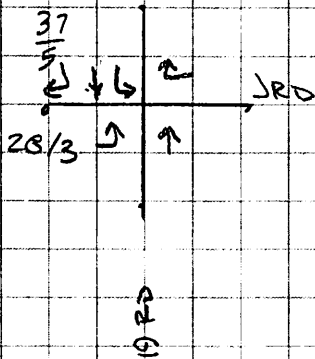
$\frac{41\%}{36\%} \times \frac{17\%}{2\%} = \frac{7\%}{1\%}$
 $\frac{41\%}{36\%} \times \frac{78\%}{86\%} = \frac{32\%}{31\%}$
 $\frac{41\%}{36\%} \times \frac{5\%}{12\%} = \frac{2\%}{4\%}$

PROJECT: WESTON

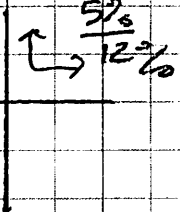
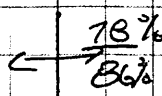
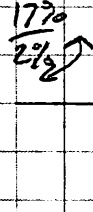
DATE: 12-3-2020

SB 19 RD DIST.

ASSUME SB-WB COMBINE W/ SB, OTHERWISE WOULD HAVE USE 3. AD ETC.



$$T = \frac{37 + 28 + 214 + 25 + 2 + 9}{5 + 3 + 107 + 222 + 20 + 5} = \frac{305}{352}$$

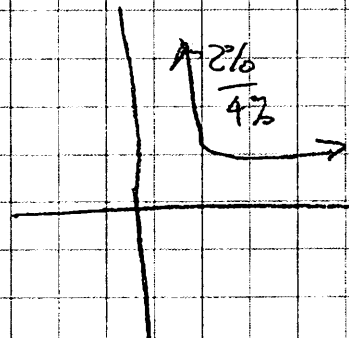
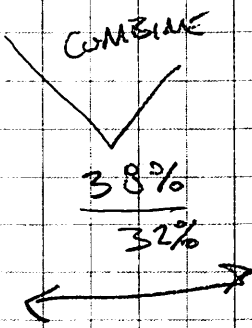


DIST SB PROJ TRAFFIC @ 19 & J RD @ $\frac{40\%}{36\%}$

$$\frac{40\%}{36\%} \div \frac{17\%}{2\%} = \frac{7\%}{1\%}$$

$$\frac{78\%}{86\%} \div \frac{40\%}{36\%} = \frac{31\%}{31\%}$$

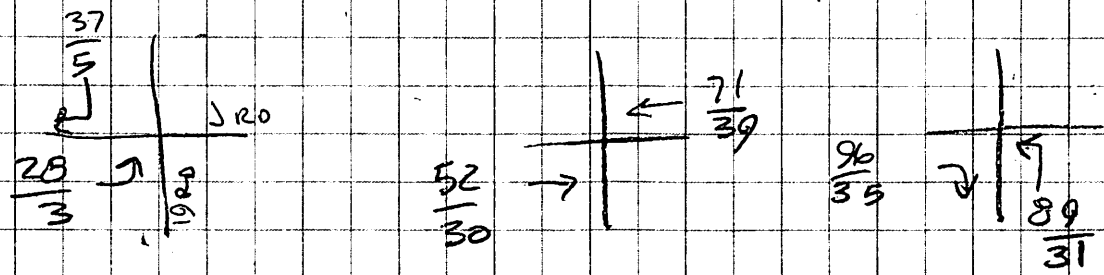
$$\frac{57\%}{12\%} \div \frac{40\%}{36\%} = \frac{27\%}{4\%}$$



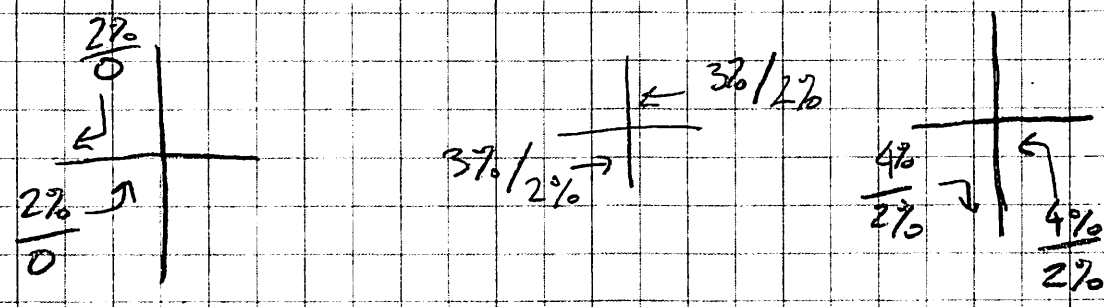
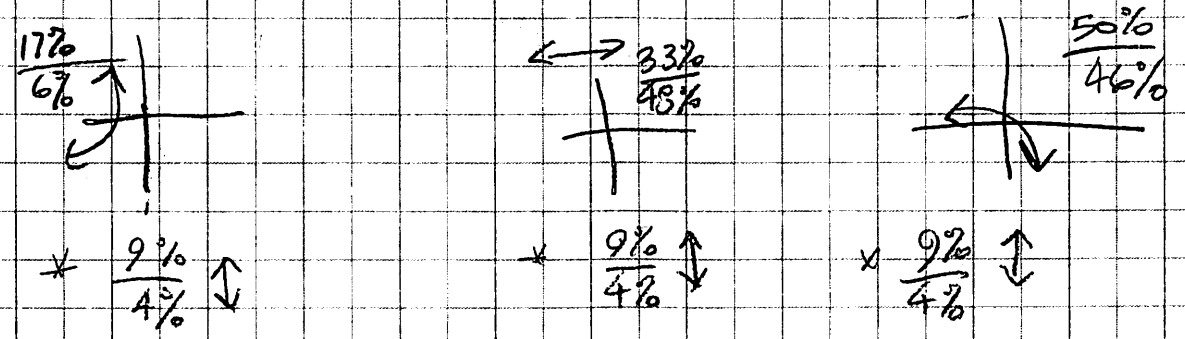
PROJECT: WESTON ESTATES
 DATE: 12-2-20

19 & S ROAD DISTRIBUTIONS FROM DIFF. DIRECTIONS

1. START @ ADLER EXIT ON I WORK TOWARDS 19 ROAD, THEREFORE DETERMINE E/T/F N, E/T/F S, E/T/F E



TOTAL = $\frac{37+28+71+52+89+96}{5+3+39+30+31+35} = \frac{373}{143}$

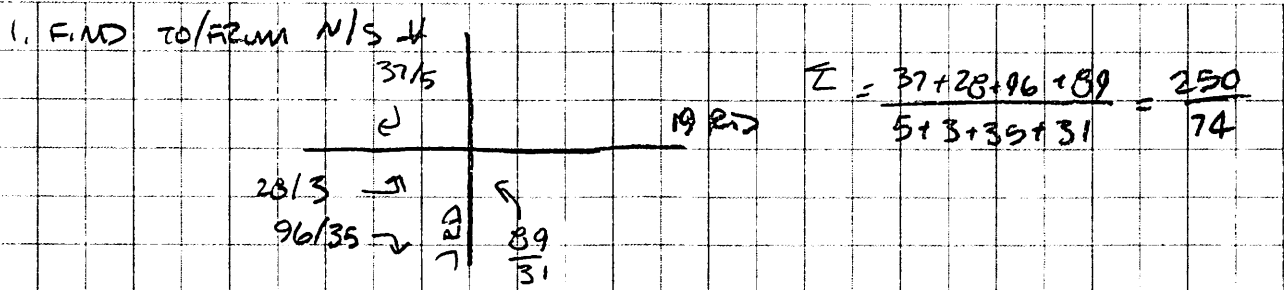


PROJECT: WESTON ESTATES

DATE: 12-2-2020

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DISTRIBUTION FOR S. ADJUT FROM 19 & J RD
USING 19 & J ROAD EBS N & EBS

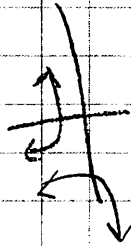


2. DIST. CALCS :

TO/FROM NORTH

$$\frac{AM}{PM} = \frac{(37+28)/250}{(5+3)/174} = \frac{26\%}{11\%}$$

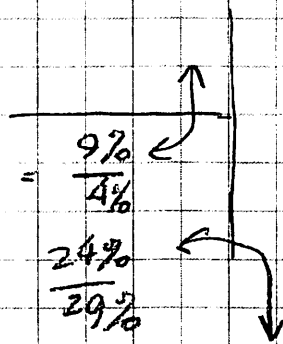
$$\frac{TO/FROM SOUTH}{89\%} = \frac{74\%}{89\%}$$



3. APPLY DIST. TO ZONE (C) WHICH CONTAINS 33% OF DUS

$$33\% \times \frac{26\%}{11\%} = \frac{9\%}{4\%}$$

$$33\% \times \frac{74\%}{89\%} = \frac{24\%}{29\%}$$



Appendix C – Turning Movement Count Traffic Summaries

Intersection Turning Movement Count Summary

Project: Weston Estates
Location: Fruita, CO
EB/WB Road: SH50
NB/SB Road: 19 Rd



Counted by: APX
Count Date: 11/12/2020
Peak Season Adjust: 1

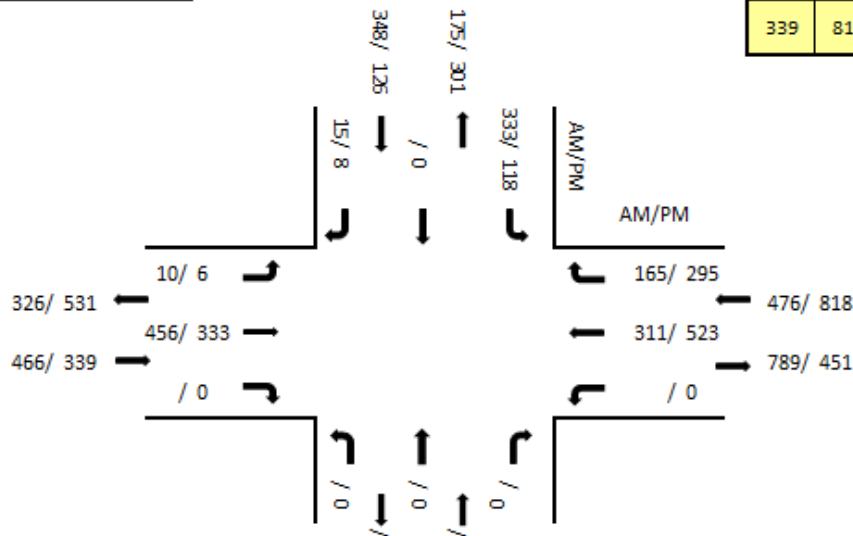
Intersection 1

Time	SH50 - (EB)				SH50 - (WB)				19 Rd - (NB)				19 Rd - (SB)				Total Volume
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	
7:00	0	99	0	0	0	54	19	0	0	0	0	0	70	0	0	0	242
7:15	1	116	0	0	0	79	43	0	0	0	0	0	74	0	2	0	315
7:30	4	120	0	0	0	88	47	0	0	0	0	0	101	0	5	0	365
7:45	5	121	0	0	0	90	56	0	0	0	0	0	88	0	8	0	368
8:00	0	80	0	0	0	60	21	0	0	0	0	0	47	0	1	0	209
8:15	0	92	0	0	0	57	23	0	0	0	0	0	43	0	0	0	215
8:30	1	84	0	0	0	63	25	0	0	0	0	0	64	0	0	0	237
8:45	1	77	0	0	0	56	22	0	0	0	0	0	48	0	2	0	206
Totals	12	789	0	0	0	547	256	0	0	0	0	0	535	0	18	0	2157

Peak Hr	10	456	0	0	0	311	165	0	0	0	0	0	333	0	15	0	1290
		EB	WB	NB	SB	Total							466	476	0	348	1290
Intersection Peak Hour:	7:00-8:00 AM																

Time	SH50 - (EB)				SH50 - (WB)				19 Rd - (NB)				19 Rd - (SB)				Total Volume
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	
4:00	1	84	0	0	0	105	38	0	0	0	0	0	37	0	1	0	266
4:15	3	78	0	0	0	129	60	0	0	0	0	0	49	0	1	0	320
4:30	1	73	0	0	0	156	53	0	0	0	0	0	44	0	3	0	330
4:45	0	81	0	0	0	128	70	0	0	0	0	0	28	0	0	0	307
5:00	4	85	0	0	0	124	74	0	0	0	0	0	30	0	2	0	319
5:15	0	88	0	0	0	147	68	0	0	0	0	0	22	0	0	0	325
5:30	2	79	0	0	0	124	83	0	0	0	0	0	38	0	6	0	332
5:45	4	67	0	0	0	109	56	0	0	0	0	0	32	0	2	0	270
Totals	15	635	0	0	0	1022	502	0	0	0	0	0	280	0	15	0	2469

Peak Hr	6	333	0	0	0	523	295	0	0	0	0	0	118	0	8	0	1283
		EB	WB	NB	SB	Total							339	818	0	126	1283
Intersection Peak Hour:	4:45-5:45 PM																



Appendix C – Turning Movement Count Traffic Summaries

Intersection Turning Movement Count Summary

Project: Weston Estates
 Location: Fruita, CO
 EB/WB Road J Rd
 NB/SB Road: 19 Rd



Counted by: APX
 Count Date: 11/12/2020

Intersection 2

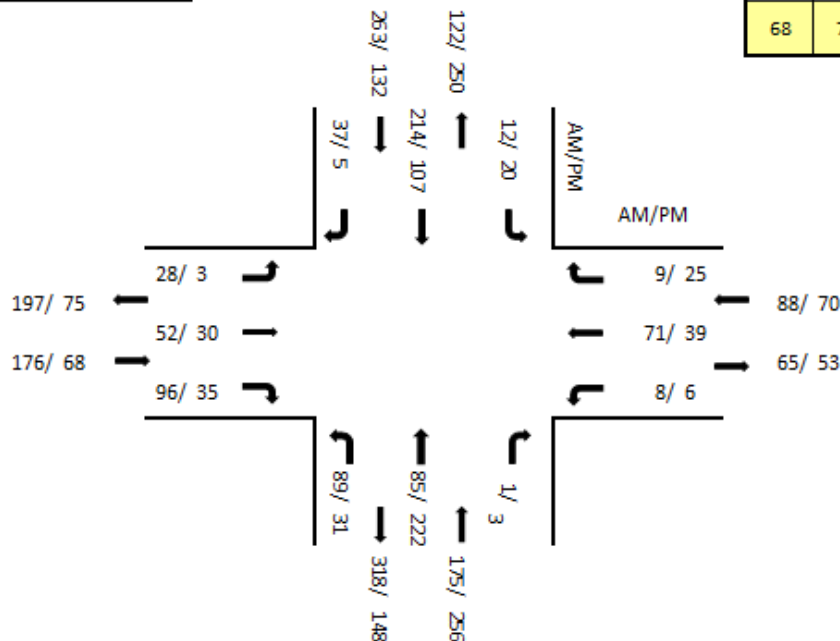
Peak Season Adjust: 1

Time	J Rd - (EB)				J Rd - (WB)				19 Rd - (NB)				19 Rd - (SB)				Total Volume
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	
7:00	0	3	7	0	1	2	3	0	4	10	0	0	1	57	0	0	88
7:15	1	6	10	0	4	17	1	0	18	15	0	0	3	56	3	0	134
7:30	9	22	24	0	0	25	3	0	35	18	0	0	2	62	16	0	216
7:45	17	18	51	0	3	21	4	0	35	30	1	0	4	57	17	0	258
8:00	1	6	11	0	1	8	1	0	1	22	0	0	3	39	1	0	94
8:15	0	3	3	0	0	0	4	0	1	19	1	0	2	49	0	0	82
8:30	1	4	2	0	0	7	6	0	4	28	0	0	4	50	0	0	106
8:45	1	6	8	0	0	9	7	0	5	20	0	0	6	49	1	0	112
Totals	30	68	116	0	9	89	29	0	103	162	2	0	25	419	38	0	1090

Peak Hr	28	52	96	0	8	71	9	0	89	85	1	0	12	214	37	0	702
													EB	WB	NB	SB	Total
Intersection Peak Hour:	7:15-8:15 AM												176	88	175	263	702

Time	J Rd - (EB)				J Rd - (WB)				19 Rd - (NB)				19 Rd - (SB)				Total Volume
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	
4:00	3	5	9	0	6	6	1	0	3	37	0	0	20	46	1	0	137
4:15	3	5	4	0	0	3	6	0	5	49	2	0	9	42	1	0	129
4:30	3	5	3	0	1	6	5	0	8	62	1	0	3	25	1	0	123
4:45	0	11	6	0	1	10	6	0	10	58	0	0	8	17	3	0	130
5:00	1	5	7	0	2	11	5	0	7	56	1	0	4	27	0	0	126
5:15	0	5	4	0	3	13	7	0	5	60	0	0	8	26	2	0	133
5:30	1	10	11	0	1	10	7	0	5	51	1	0	5	27	2	0	131
5:45	1	10	13	0	0	5	6	0	14	55	1	0	3	27	1	0	136
Totals	12	56	57	0	14	64	43	0	57	428	6	0	60	237	11	0	1045

Peak Hr	3	30	35	0	6	39	25	0	31	222	3	0	20	107	5	0	526
													EB	WB	NB	SB	Total
Intersection Peak Hour:	5:00-6:00 PM												68	70	256	132	526



Appendix C – Turning Movement Count Traffic Summaries

Intersection Turning Movement Count Summary

Project: Weston Estates
 Location: Fruita, CO
 EB/WB Road J 2/10 Rd
 NB/SB Road: 19 Rd



Counted by: APX
 Count Date: 11/12/2020

Intersection 4

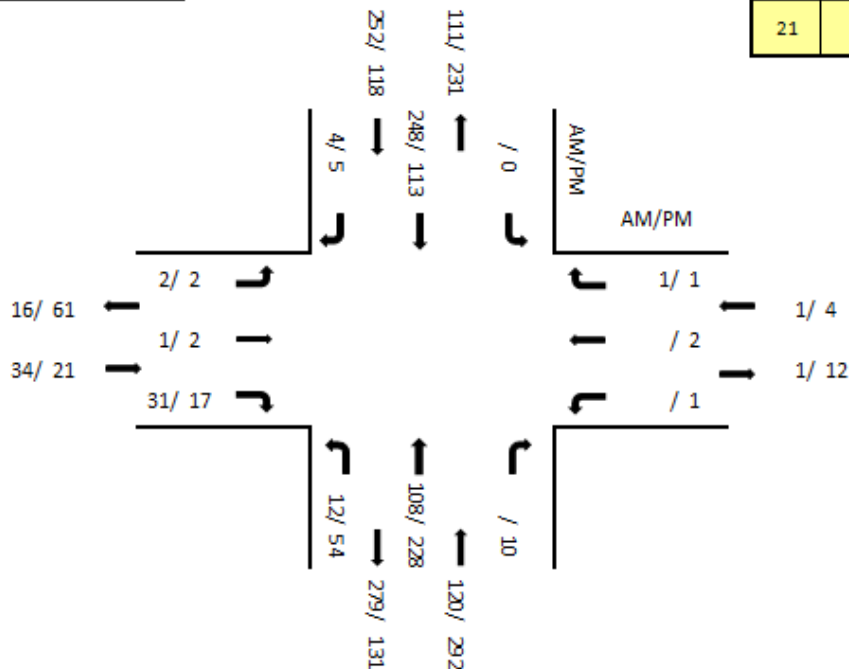
Peak Season Adjust: 1

Time	J 2/10 Rd - (EB)				J 2/10 Rd - (WB)				19 Rd - (NB)				19 Rd - (SB)				Total Volume
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	
7:00	0	0	10	0	0	0	0	0	1	15	0	0	0	44	0	0	70
7:15	0	0	5	0	0	0	0	0	1	19	0	0	0	63	1	0	89
7:30	0	0	12	0	0	0	0	0	4	21	0	0	0	87	2	0	126
7:45	1	1	12	0	0	0	0	0	3	48	0	0	0	53	0	0	118
8:00	1	0	2	0	0	0	1	0	4	20	0	0	0	45	1	0	74
8:15	2	0	9	0	0	0	0	0	5	16	0	0	0	35	0	0	67
8:30	0	0	6	0	0	1	1	0	1	35	0	0	1	59	1	0	105
8:45	1	0	2	0	0	0	0	0	2	25	1	0	0	42	0	0	73
Totals	5	1	58	0	0	1	2	0	21	199	1	0	1	428	5	0	722

Peak Hr	2	1	31	0	0	0	1	0	12	108	0	0	0	248	4	0	407
													EB	WB	NB	SB	Total
Intersection Peak Hour:	7:15-8:15 AM												34	1	120	252	407

Time	J 2/10 Rd - (EB)				J 2/10 Rd - (WB)				19 Rd - (NB)				19 Rd - (SB)				Total Volume
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	
4:00	0	2	8	0	0	0	1	0	1	31	0	0	2	45	1	0	91
4:15	0	0	15	0	0	0	0	0	10	48	0	0	1	38	1	0	113
4:30	2	0	5	0	1	0	0	0	10	37	0	0	1	30	1	0	87
4:45	1	1	3	0	0	0	0	0	13	57	0	0	0	35	1	0	111
5:00	0	1	5	0	0	1	0	0	14	38	10	0	0	29	1	0	99
5:15	0	0	1	0	0	0	1	0	16	70	0	0	0	23	0	0	111
5:30	1	0	8	0	1	1	0	0	11	63	0	0	0	26	3	0	114
5:45	0	1	0	0	0	0	0	0	12	43	0	0	0	26	1	0	83
Totals	4	5	45	0	2	2	2	0	87	387	10	0	4	252	9	0	809

Peak Hr	2	2	17	0	1	2	1	0	54	228	10	0	0	113	5	0	435
													EB	WB	NB	SB	Total
Intersection Peak Hour:	4:45-5:45 PM												21	4	292	118	435



Appendix C – Turning Movement Count Traffic Summaries



Intersection Turning Movement Count Summary

Project: Weston Estates
Location: Fruita, CO
EB/WB Road J Rd
NB/SB Road: Fremont

Intersection 6

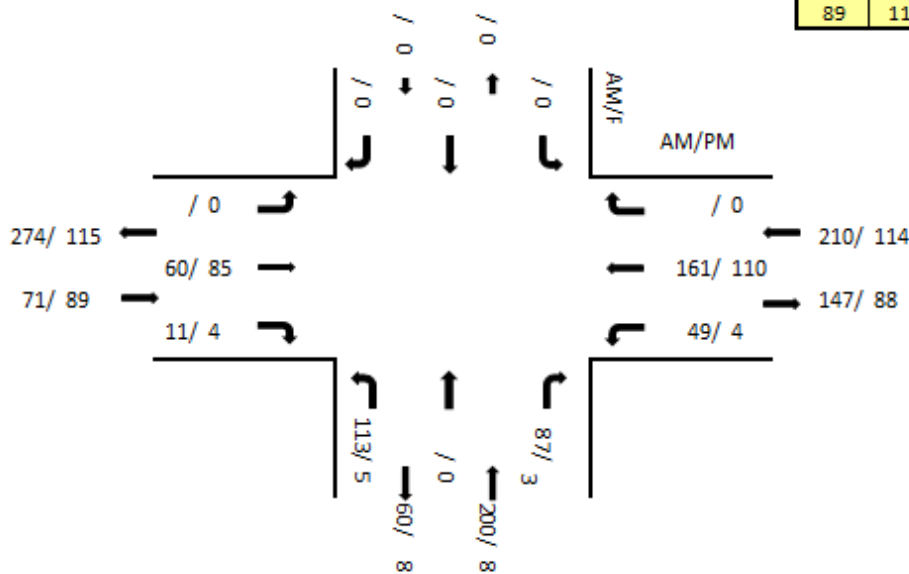
Counted by: APX
Count Date: 11/13/2020
Peak Season Adjust: 1

Time AM	J Rd - (EB)				J Rd - (WB)				Fremont - (NB)				Fremont - (SB)				Total Volume	
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR		
7:00	0	3	0	0	1	6	0	0	0	0	2	0	0	0	0	0	0	12
7:15	0	7	2	0	1	28	0	0	11	0	9	0	0	0	0	0	0	58
7:30	0	27	7	0	29	85	0	0	46	0	34	0	0	0	0	0	0	228
7:45	0	16	2	0	18	38	0	0	45	0	39	0	0	0	0	0	0	158
8:00	0	10	0	0	1	10	0	0	11	0	5	0	0	0	0	0	0	37
8:15	0	5	0	0	0	3	0	0	4	0	0	0	0	0	0	0	0	12
8:30	0	4	1	0	2	8	0	0	0	0	0	0	0	0	0	0	0	15
8:45	0	8	0	0	2	8	0	0	1	0	3	0	0	0	0	0	0	22
Totals	0	80	12	0	54	186	0	0	118	0	92	0	0	0	0	0	0	542

Peak Hr	0	60	11	0	49	161	0	0	113	0	87	0	0	0	0	0	0	0	481
		EB	WB	NB	SB	Total													
Intersection Peak Hour:	7:15-8:15	AM																	
		71	210	200	0	481													

Time PM	J Rd - (EB)				J Rd - (WB)				Fremont - (NB)				Fremont - (SB)				Total Volume	
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR		
4:00	0	21	2	0	0	13	0	0	4	0	2	0	0	0	0	0	0	42
4:15	0	32	0	0	1	44	0	0	1	0	1	0	0	0	0	0	0	79
4:30	0	16	2	0	1	32	0	0	0	0	0	0	0	0	0	0	0	51
4:45	0	16	0	0	2	21	0	0	0	0	0	0	0	0	0	0	0	39
5:00	0	11	1	0	0	15	0	0	1	0	0	0	0	0	0	0	0	28
5:15	0	20	2	0	0	17	0	0	4	0	5	0	0	0	0	0	0	48
5:30	0	19	0	0	1	15	0	0	2	0	1	0	0	0	0	0	0	38
5:45	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Totals	0	135	7	0	5	158	0	0	12	0	9	0	0	0	0	0	0	326

Peak Hr	0	85	4	0	4	110	0	0	5	0	3	0	0	0	0	0	0	0	211
Intersection Peak Hour:	4:00-5:00	PM																	
		89	114	8	0	211													



Appendix C – Turning Movement Count Traffic Summaries

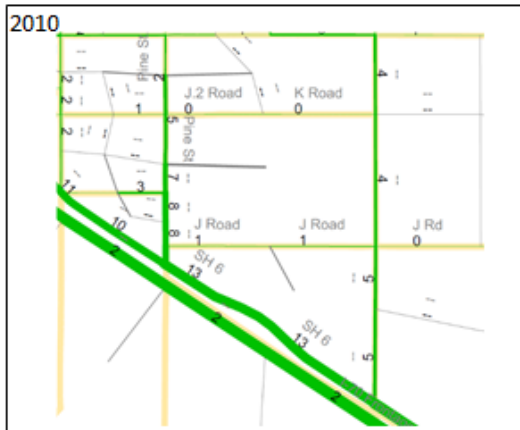
Appendix D

Road Segment Growth Factor Calculation Summary

Road	Segment	ADT		Period Growth Factor	Avg. Annual Growth Rate	4 - year growth factor (2021-2025)	24 - year growth factor (2021-2045)
		2010	2040				
SH 50	W of 19 Rd	10	13	1.300	0.88	1.036	1.234
SH 50	E of 19 Rd	13	15	1.154	0.48	1.019	1.122
19 Road	S of J Rd	5	11	2.200	2.66	1.111	1.878
19 Road	Between J & K Rd	4	10	2.500	3.10	1.130	2.081
J Road	West of 19 Rd	1	4	4.000	4.73	1.203	3.032
J Road	East of 19 Rd	Use J Road west of 19 Road					
J.2 Road		Use J Road west of 19 Road					

CDOT Model Period = 20
CDOT Inverse Period = 0.0500

Model Period = 30
Inverse Period = 0.0333



Appendix E – Peak Hour Traffic Calculation

INT 1 - 19 Rd & SH 50

1/13/2021

Weston Estates - 126 Lots

AM Condition												
Description	Eastbound			Westbound			Northbound			Southbound		
	L	TH	R	L	TH	R	L	TH	R	L	TH	R
Existing Volumes	10	456			311	165				333		15
Seasonally Adjusted base volumes	10	456	0	0	311	165	0	0	0	333	0	15
Trip Distribution % Inbound Phase 1	0%	0%	0%	0%	0%	42%	0%	0%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 1	0%	0%	0%	0%	0%	0%	0%	0%	0%	42%	0%	0%
Driveway Enter "1" Yes, or "0" No Phase 1	1	1	1	1	1	1	1	1	1	1	1	1
Trip Distribution % Inbound Phase 2	0%	0%	0%	0%	0%	42%	0%	0%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 2	0%	0%	0%	0%	0%	0%	0%	0%	0%	42%	0%	0%
Driveway Enter "1" Yes, or "0" No Phase 2	1	1	1	1	1	1	1	1	1	1	1	1
Project Trip Volume Inbound - Phase 1	0	0	0	0	0	11	0	0	0	0	0	0
Project Trip Volume Outbound - Phase 1	0	0	0	0	0	0	0	0	0	31	0	0
Project Trip Volume Total - Phase 1	0	0	0	0	0	11	0	0	0	31	0	0
Project Trip Volume Inbound - Phase 2	0	0	0	0	0	11	0	0	0	0	0	0
Project Trip Volume Outbound - Phase 2	0	0	0	0	0	0	0	0	0	31	0	0
Project Trip Volume Total - Phase 2	0	0	0	0	0	11	0	0	0	31	0	0
Growth Factor Period 1	1.036	1.036	0.000	0.000	1.019	1.019	0.000	0.000	0.000	1.111	0.000	1.111
Growth Factor Period 2	1.234	1.234	0.000	0.000	1.122	1.122	0.000	0.000	0.000	1.878	0.000	1.878
Future Background Volume - Period 1	10	472			317	168				370		17
Future Background Volume - Period 2	12	563			349	185				625		28
Other Trip Assignment AM Period 1			2	10			0		17			
Other Trip Assignment AM Period 2			2	10			0		17			
Total Future Volume - Period 1	10	472			317	179				401		17
Total Future Volume - Period 2	12	563			349	196				656		28

PM Condition												
Description	Eastbound			Westbound			Northbound			Southbound		
	L	TH	R	L	TH	R	L	TH	R	L	TH	R
Existing Volumes	6	333			523	295				118		8
Seasonally Adjusted base volumes	6	333	0	0	523	295	0	0	0	118	0	8
Trip Distribution % Inbound Phase 1	0%	0%	0%	0%	0%	34%	0%	0%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 1	0%	0%	0%	0%	0%	0%	0%	0%	0%	34%	0%	0%
Trip Distribution % Inbound Phase 2	0%	0%	0%	0%	0%	34%	0%	0%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 2	0%	0%	0%	0%	0%	0%	0%	0%	0%	34%	0%	0%
Project Trip Volume Inbound - Phase 1	0	0	0	0	0	29	0	0	0	0	0	0
Project Trip Volume Outbound - Phase 1	0	0	0	0	0	0	0	0	0	16	0	0
Project Trip Volume Total - Phase 1	0	0	0	0	0	29	0	0	0	16	0	0
Project Trip Volume Inbound - Phase 2	0	0	0	0	0	29	0	0	0	0	0	0
Project Trip Volume Outbound - Phase 2	0	0	0	0	0	0	0	0	0	16	0	0
Project Trip Volume Total - Phase 2	0	0	0	0	0	29	0	0	0	16	0	0
Growth Factor Period 1	1.036	1.036			1.019	1.019				1.111		1.111
Growth Factor Period 2	1.234	1.234			1.122	1.122				1.878		1.878
Future Background Volume - Period 1	6	345			533	301				131		9
Future Background Volume - Period 2	7	411			587	331				222		15
Other Trip Assignment AM Period 1			0	16			1		11			
Other Trip Assignment AM Period 2			0	16			1		11			
Total Future Volume - Period 1	6	345			533	330				147		9
Total Future Volume - Period 2	7	411			587	360				238		15

NOTES:

Appendix E – Peak Hour Traffic Calculation

INT 2 - 19 Rd & J Rd

1/13/2021

AM Condition												
Description	Eastbound			Westbound			Northbound			Southbound		
	L	TH	R	L	TH	R	L	TH	R	L	TH	R
Existing Volumes	28	52	96	8	71	9	89	85	1	12	214	37
¹ Seasonally Adjusted base volumes	28	52	96	8	71	9	89	85	1	12	214	37
Trip Distribution % Inbound Phase 1	0%	0%	0%	0%	3%	2%	4%	38%	0%	0%	0%	2%
Trip Distribution % Outbound Phase 1	2%	3%	4%	0%	0%	0%	0%	0%	0%	2%	38%	0%
Driveway Enter "1" Yes, or "0" No Phase 1	1	1	1	1	1	1	1	1	1	1	1	1
Trip Distribution % Inbound Phase 2	0%	0%	0%	0%	3%	2%	4%	38%	0%	0%	0%	2%
Trip Distribution % Outbound Phase 2	2%	3%	4%	0%	0%	0%	0%	0%	0%	2%	38%	0%
Driveway Enter "1" Yes, or "0" No Phase 2	1	1	1	1	1	1	1	1	1	1	1	1
Project Trip Volume Inbound - Phase 1	0	0	0	0	1	1	1	10	0	0	0	1
Project Trip Volume Outbound - Phase 1	1	2	3	0	0	0	0	0	0	1	28	0
Project Trip Volume Total - Phase 1	1	2	3	0	1	1	1	10	0	1	28	1
Project Trip Volume Inbound - Phase 2	0	0	0	0	1	1	1	10	0	0	0	1
Project Trip Volume Outbound - Phase 2	1	2	3	0	0	0	0	0	0	1	28	0
Project Trip Volume Total - Phase 2	1	2	3	0	1	1	1	10	0	1	28	1
Growth Factor Period 1	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.111	1.130	1.130	1.130	1.130
Growth Factor Period 2	2.081	2.081	2.081	2.081	2.081	2.081	2.081	1.878	2.081	2.081	2.081	2.081
Future Background Volume - Period 1	32	59	108	9	80	10	101	94	1	14	242	42
Future Background Volume - Period 2	58	108	200	17	148	19	185	160	2	25	445	77
Other Trip Assignment AM Period 1												
Other Trip Assignment AM Period 2												
Total Future Volume - Period 1	33	61	111	9	81	11	102	104	1	15	270	43
Total Future Volume - Period 2	59	110	203	17	149	20	186	170	2	26	473	78

PM Condition												
Description	Eastbound			Westbound			Northbound			Southbound		
	L	TH	R	L	TH	R	L	TH	R	L	TH	R
Existing Volumes	3	30	35	6	39	25	31	222	3	20	107	5
Seasonally Adjusted base volumes	3	30	35	6	39	25	31	222	3	20	107	5
Trip Distribution % Inbound Phase 1	0%	0%	0%	0%	2%	4%	2%	32%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 1	0%	2%	2%	0%	0%	0%	0%	0%	0%	4%	32%	0%
Trip Distribution % Inbound Phase 2	0%	0%	0%	0%	2%	4%	2%	32%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 2	0%	2%	2%	0%	0%	0%	0%	0%	0%	4%	32%	0%
Project Trip Volume Inbound - Phase 1	0	0	0	0	2	3	2	27	0	0	0	0
Project Trip Volume Outbound - Phase 1	0	1	1	0	0	0	0	0	0	2	15	0
Project Trip Volume Total - Phase 1	0	1	1	0	2	3	2	27	0	2	15	0
Project Trip Volume Inbound - Phase 2	0	0	0	0	2	3	2	27	0	0	0	0
Project Trip Volume Outbound - Phase 2	0	1	1	0	0	0	0	0	0	2	15	0
Project Trip Volume Total - Phase 2	0	1	1	0	2	3	2	27	0	2	15	0
Growth Factor Period 1	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.111	1.130	1.130	1.130	1.130
Growth Factor Period 2	2.081	2.081	2.081	2.081	2.081	2.081	2.081	1.878	2.081	2.081	2.081	2.081
Future Background Volume - Period 1	3	34	40	7	44	28	35	247	3	23	121	6
Future Background Volume - Period 2	6	62	73	12	81	52	65	417	6	42	223	10
Other Trip Assignment AM Period 1												
Other Trip Assignment AM Period 2												
Total Future Volume - Period 1	3	35	41	7	46	31	37	274	3	25	136	6
Total Future Volume - Period 2	6	63	74	12	83	55	67	444	6	44	238	10

NOTES:

Appendix E – Peak Hour Traffic Calculation

INT 3 - 19 Rd & Silver Berry

1/13/2021

AM Condition												
Description	Eastbound			Westbound			Northbound			Southbound		
	L	TH	R	L	TH	R	L	TH	R	L	TH	R
Existing Volumes									122			279
Seasonally Adjusted base volumes	0	0	0	0	0	0	0	122	0	0	279	0
Trip Distribution % Inbound Phase 1	0%	0%	0%	0%	0%	0%	33%	7%	0%	0%	0%	4%
Trip Distribution % Outbound Phase 1	4%	0%	33%	0%	0%	0%	0%	2%	0%	0%	7%	0%
Driveway Enter "1" Yes, or "0" No Phase 1	1	1	1	1	1	1	1	1	1	1	1	1
Trip Distribution % Inbound Phase 2	0%	0%	0%	0%	0%	0%	33%	7%	0%	0%	0%	4%
Trip Distribution % Outbound Phase 2	4%	0%	33%	0%	0%	0%	0%	2%	0%	0%	7%	0%
Driveway Enter "1" Yes, or "0" No Phase 2	1	1	1	1	1	1	1	1	1	1	1	1
Project Trip Volume Inbound - Phase 1	0	0	0	0	0	0	9	2	0	0	0	1
Project Trip Volume Outbound - Phase 1	3	0	24	0	0	0	0	1	0	0	5	0
Project Trip Volume Total - Phase 1	3	0	24	0	0	0	9	3	0	0	5	1
Project Trip Volume Inbound - Phase 2	0	0	0	0	0	0	9	2	0	0	0	1
Project Trip Volume Outbound - Phase 2	3	0	24	0	0	0	0	1	0	0	5	0
Project Trip Volume Total - Phase 2	3	0	24	0	0	0	9	3	0	0	5	1
Growth Factor Period 1	1.000	0.000	1.000	0.000	0.000	0.000	1.000	1.203	0.000	0.000	1.203	1.000
Growth Factor Period 2	1.000	0.000	1.000	0.000	0.000	0.000	1.000	3.032	0.000	0.000	3.032	1.000
Future Background Volume - Period 1	0		0				0	147			336	0
Future Background Volume - Period 2	0		0				0	370			846	0
Other Trip Assignment AM Period 1												
Other Trip Assignment AM Period 2												
Total Future Volume - Period 1	3		24				9	150			341	1
Total Future Volume - Period 2	3		24				9	373			851	1

PM Condition												
Description	Eastbound			Westbound			Northbound			Southbound		
	L	TH	R	L	TH	R	L	TH	R	L	TH	R
Existing Volumes									250			131
Seasonally Adjusted base volumes	0	0	0	0	0	0	0	250	0	0	131	0
Trip Distribution % Inbound Phase 1	0%	0%	0%	0%	0%	0%	33%	3%	0%	0%	0%	4%
Trip Distribution % Outbound Phase 1	4%	0%	33%	0%	0%	0%	0%	0%	0%	0%	3%	0%
Trip Distribution % Inbound Phase 2	0%	0%	0%	0%	0%	0%	33%	3%	0%	0%	0%	4%
Trip Distribution % Outbound Phase 2	4%	0%	33%	0%	0%	0%	0%	0%	0%	0%	3%	0%
Project Trip Volume Inbound - Phase 1	0	0	0	0	0	0	28	3	0	0	0	3
Project Trip Volume Outbound - Phase 1	2	0	16	0	0	0	0	0	0	0	1	0
Project Trip Volume Total - Phase 1	2	0	16	0	0	0	28	3	0	0	1	3
Project Trip Volume Inbound - Phase 2	0	0	0	0	0	0	28	3	0	0	0	3
Project Trip Volume Outbound - Phase 2	2	0	16	0	0	0	0	0	0	0	1	0
Project Trip Volume Total - Phase 2	2	0	16	0	0	0	28	3	0	0	1	3
Growth Factor Period 1	1.000		1.000				1.000	1.203			1.203	1.000
Growth Factor Period 2	1.000		1.000				1.000	3.032			3.032	1.000
Future Background Volume - Period 1	0		0				0	301			158	0
Future Background Volume - Period 2	0		0				0	758			397	0
Other Trip Assignment AM Period 1												
Other Trip Assignment AM Period 2												
Total Future Volume - Period 1	2		16				28	304			159	3
Total Future Volume - Period 2	2		16				28	761			398	3

NOTES:

Appendix E – Peak Hour Traffic Calculation

INT 4 - 19 Rd & J 2/10 Rd

1/13/2021

AM Condition												
Description	Eastbound			Westbound			Northbound			Southbound		
	L	TH	R	L	TH	R	L	TH	R	L	TH	R
Existing Volumes	2	1	31	0	0	1	12	108	0	0	248	4
Seasonally Adjusted base volumes	2	1	31	0	0	1	12	108	0	0	248	4
Trip Distribution % Inbound Phase 1	0%	0%	0%	0%	0%	0%	7%	0%	0%	1%	6%	0%
Trip Distribution % Outbound Phase 1	1%	0%	7%	0%	0%	0%	0%	6%	0%	0%	0%	0%
Driveway Enter "1" Yes, or "0" No Phase 1	1	1	1	1	1	1	1	1	1	1	1	1
Trip Distribution % Inbound Phase 2	0%	0%	0%	0%	0%	0%	7%	0%	0%	1%	6%	0%
Trip Distribution % Outbound Phase 2	1%	0%	7%	0%	0%	0%	0%	6%	0%	0%	0%	0%
Driveway Enter "1" Yes, or "0" No Phase 2	1	1	1	1	1	1	1	1	1	1	1	1
Project Trip Volume Inbound - Phase 1	0	0	0	0	0	0	2	0	0	0	2	0
Project Trip Volume Outbound - Phase 1	1	0	5	0	0	0	0	4	0	0	0	0
Project Trip Volume Total - Phase 1	1	0	5	0	0	0	2	4	0	0	2	0
Project Trip Volume Inbound - Phase 2	0	0	0	0	0	0	2	0	0	0	2	0
Project Trip Volume Outbound - Phase 2	1	0	5	0	0	0	0	4	0	0	0	0
Project Trip Volume Total - Phase 2	1	0	5	0	0	0	2	4	0	0	2	0
Growth Factor Period 1	1.000	1.203	1.000	1.000	1.000	1.000	1.000	1.019	1.000	1.000	1.019	1.000
Growth Factor Period 2	1.000	3.032	1.000	1.000	1.000	1.000	1.000	1.122	1.000	1.000	1.122	1.000
Future Background Volume - Period 1	2	1	31	0	0	1	12	110	0	0	253	4
Future Background Volume - Period 2	2	3	31	0	0	1	12	121	0	0	278	4
Other Trip Assignment AM Period 1												
Other Trip Assignment AM Period 2												
Total Future Volume - Period 1	3	1	36	0	0	1	14	114	0	0	255	4
Total Future Volume - Period 2	3	3	36	0	0	1	14	125	0	0	280	4

PM Condition												
Description	Eastbound			Westbound			Northbound			Southbound		
	L	TH	R	L	TH	R	L	TH	R	L	TH	R
Existing Volumes	2	2	17	1	2	1	54	228	10	0	113	5
Seasonally Adjusted base volumes	2	2	17	1	2	1	54	228	10	0	113	5
Trip Distribution % Inbound Phase 1	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	4%	0%
Trip Distribution % Outbound Phase 1	0%	0%	3%	0%	0%	0%	0%	4%	0%	0%	0%	0%
Trip Distribution % Inbound Phase 2	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	4%	0%
Trip Distribution % Outbound Phase 2	0%	0%	3%	0%	0%	0%	0%	4%	0%	0%	0%	0%
Project Trip Volume Inbound - Phase 1	0	0	0	0	0	0	3	0	0	0	3	0
Project Trip Volume Outbound - Phase 1	0	0	1	0	0	0	0	2	0	0	0	0
Project Trip Volume Total - Phase 1	0	0	1	0	0	0	3	2	0	0	3	0
Project Trip Volume Inbound - Phase 2	0	0	0	0	0	0	3	0	0	0	3	0
Project Trip Volume Outbound - Phase 2	0	0	1	0	0	0	0	2	0	0	0	0
Project Trip Volume Total - Phase 2	0	0	1	0	0	0	3	2	0	0	3	0
Growth Factor Period 1	1.000	1.203	1.000	1.000	1.000	1.000	1.000	1.019	1.000	1.000	1.019	1.000
Growth Factor Period 2	1.000	3.032	1.000	1.000	1.000	1.000	1.000	1.122	1.000	1.000	1.122	1.000
Future Background Volume - Period 1	2	2	17	1	2	1	54	232	10	0	115	5
Future Background Volume - Period 2	2	6	17	1	2	1	54	256	10	0	127	5
Other Trip Assignment AM Period 1												
Other Trip Assignment AM Period 2												
Total Future Volume - Period 1	2	2	18	1	2	1	57	234	10	0	118	5
Total Future Volume - Period 2	2	6	18	1	2	1	57	258	10	0	130	5

NOTES:

Appendix E – Peak Hour Traffic Calculation

AM Condition												
Description	Eastbound			Westbound			Northbound			Southbound		
	L	TH	R	L	TH	R	L	TH	R	L	TH	R
Existing Volumes		176			197							
Seasonally Adjusted base volumes	0	176	0	0	197	0	0	0	0	0	0	0
Trip Distribution % Inbound Phase 1	24%	0%	0%	0%	0%	9%	0%	0%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 1	0%	0%	0%	0%	0%	0%	0%	0%	0%	9%	0%	24%
Driveway Enter "1" Yes, or "0" No Phase 1	1	1	1	1	1	1	1	1	1	1	1	1
Trip Distribution % Inbound Phase 2	24%	0%	0%	0%	0%	9%	0%	0%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 2	0%	0%	0%	0%	0%	0%	0%	0%	0%	9%	0%	24%
Driveway Enter "1" Yes, or "0" No Phase 2	1	1	1	1	1	1	1	1	1	1	1	1
Project Trip Volume Inbound - Phase 1	6	0	0	0	0	2	0	0	0	0	0	0
Project Trip Volume Outbound - Phase 1	0	0	0	0	0	0	0	0	0	7	0	18
Project Trip Volume Total - Phase 1	6	0	0	0	0	2	0	0	0	7	0	18
Project Trip Volume Inbound - Phase 2	6	0	0	0	0	2	0	0	0	0	0	0
Project Trip Volume Outbound - Phase 2	0	0	0	0	0	0	0	0	0	7	0	18
Project Trip Volume Total - Phase 2	6	0	0	0	0	2	0	0	0	7	0	18
Growth Factor Period 1	1.000	1.203	0.000	0.000	1.203	1.000	0.000	0.000	0.000	1.000	0.000	1.000
Growth Factor Period 2	1.000	3.032	0.000	0.000	3.032	1.000	0.000	0.000	0.000	1.000	0.000	1.000
Future Background Volume - Period 1	0	212			237	0				0		0
Future Background Volume - Period 2	0	534			597	0				0		0
Other Trip Assignment AM Period 1												
Other Trip Assignment AM Period 1												
Total Future Volume - Period 1	6	212			237	2				7		18
Total Future Volume - Period 2	6	534			597	2				7		18

PM Condition												
Description	Eastbound			Westbound			Northbound			Southbound		
	L	TH	R	L	TH	R	L	TH	R	L	TH	R
Existing Volumes		68			75							
Seasonally Adjusted base volumes	0	68	0	0	75	0	0	0	0	0	0	0
Trip Distribution % Inbound Phase 1	29%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 1	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	0%	29%
Trip Distribution % Inbound Phase 2	29%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 2	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	0%	29%
Project Trip Volume Inbound - Phase 1	24	0	0	0	0	3	0	0	0	0	0	0
Project Trip Volume Outbound - Phase 1	0	0	0	0	0	0	0	0	0	2	0	14
Project Trip Volume Total - Phase 1	24	0	0	0	0	3	0	0	0	2	0	14
Project Trip Volume Inbound - Phase 2	24	0	0	0	0	3	0	0	0	0	0	0
Project Trip Volume Outbound - Phase 2	0	0	0	0	0	0	0	0	0	2	0	14
Project Trip Volume Total - Phase 2	24	0	0	0	0	3	0	0	0	2	0	14
Growth Factor Period 1	1.000	1.203			1.203	1.000				1.000		1.000
Growth Factor Period 2	1.000	3.032			3.032	1.000				1.000		1.000
Future Background Volume - Period 1	0	82			90	0				0		0
Future Background Volume - Period 2	0	206			227	0				0		0
Other Trip Assignment AM Period 1												
Other Trip Assignment AM Period 1												
Total Future Volume - Period 1	24	82			90	3				2		14
Total Future Volume - Period 2	24	206			227	3				2		14

NOTES:

Appendix E – Peak Hour Traffic Calculation

INT 6 - J Rd & Fremont

1/13/2021

AM Condition												
Description	Eastbound			Westbound			Northbound			Southbound		
	L	TH	R	L	TH	R	L	TH	R	L	TH	R
Existing Volumes		60	11	49	161		113		87			
¹ Seasonally Adjusted base volumes	0	60	11	49	161	0	113	0	87	0	0	0
Trip Distribution % Inbound Phase 1	0%	24%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 1	0%	0%	0%	0%	24%	0%	0%	0%	0%	0%	0%	0%
Driveway Enter "1" Yes, or "0" No Phase 1	1	1	1	1	1	1	1	1	1	1	1	1
² Trip Distribution % Inbound Phase 2	0%	24%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 2	0%	0%	0%	0%	24%	0%	0%	0%	0%	0%	0%	0%
Driveway Enter "1" Yes, or "0" No Phase 2	1	1	1	1	1	1	1	1	1	1	1	1
Project Trip Volume Inbound - Phase 1	0	6	0	0	0	0	0	0	0	0	0	0
Project Trip Volume Outbound - Phase 1	0	0	0	0	18	0	0	0	0	0	0	0
Project Trip Volume Total - Phase 1	0	6	0	0	18	0	0	0	0	0	0	0
Project Trip Volume Inbound - Phase 2	0	6	0	0	0	0	0	0	0	0	0	0
Project Trip Volume Outbound - Phase 2	0	0	0	0	18	0	0	0	0	0	0	0
Project Trip Volume Total - Phase 2	0	6	0	0	18	0	0	0	0	0	0	0
Growth Factor Period 1	0.000	1.203	1.000	1.000	1.203	0.000	1.000	0.000	1.000	0.000	0.000	0.000
Growth Factor Period 2	0.000	3.032	1.000	1.000	3.032	0.000	1.000	0.000	1.000	0.000	0.000	0.000
Future Background Volume - Period 1		72	11	49	194		113		87			
Future Background Volume - Period 2		182	11	49	488		113		87			
Other Trip Assignment AM Period 1												
Other Trip Assignment AM Period 2												
Total Future Volume - Period 1		78	11	49	212		113		87			
Total Future Volume - Period 2		188	11	49	506		113		87			

PM Condition												
Description	Eastbound			Westbound			Northbound			Southbound		
	L	TH	R	L	TH	R	L	TH	R	L	TH	R
Existing Volumes		85	4	4	110		5		3			
Seasonally Adjusted base volumes	0	85	4	4	110	0	5	0	3	0	0	0
Trip Distribution % Inbound Phase 1	0%	29%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 1	0%	0%	0%	0%	29%	0%	0%	0%	0%	0%	0%	0%
Trip Distribution % Inbound Phase 2	0%	29%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 2	0%	0%	0%	0%	29%	0%	0%	0%	0%	0%	0%	0%
Project Trip Volume Inbound - Phase 1	0	24	0	0	0	0	0	0	0	0	0	0
Project Trip Volume Outbound - Phase 1	0	0	0	0	14	0	0	0	0	0	0	0
Project Trip Volume Total - Phase 1	0	24	0	0	14	0	0	0	0	0	0	0
Project Trip Volume Inbound - Phase 2	0	24	0	0	0	0	0	0	0	0	0	0
Project Trip Volume Outbound - Phase 2	0	0	0	0	14	0	0	0	0	0	0	0
Project Trip Volume Total - Phase 2	0	24	0	0	14	0	0	0	0	0	0	0
Growth Factor Period 1		1.203	1.000	1.000	1.203		1.000		1.000			
Growth Factor Period 2		3.032	1.000	1.000	3.032		1.000		1.000			
Future Background Volume - Period 1		102	4	4	132		5		3			
Future Background Volume - Period 2		258	4	4	334		5		3			
Other Trip Assignment AM Period 1												
Other Trip Assignment AM Period 2												
Total Future Volume - Period 1		126	4	4	146		5		3			
Total Future Volume - Period 2		282	4	4	348		5		3			

NOTES:

Appendix E – Peak Hour Traffic Calculation

INT 7 - J Rd & Butterfly

1/13/2021

AM Condition												
Description	Eastbound			Westbound			Northbound			Southbound		
	L	TH	R	L	TH	R	L	TH	R	L	TH	R
Existing Volumes		34			16							
¹ Seasonally Adjusted base volumes	0	34	0	0	16	0	0	0	0	0	0	0
Trip Distribution % Inbound Phase 1	0%	0%	22%	8%	0%	0%	0%	0%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 1	0%	0%	0%	0%	0%	0%	22%	0%	8%	0%	0%	0%
Driveway Enter "1" Yes, or "0" No Phase 1	1	1	1	1	1	1	1	1	1	1	1	1
² Trip Distribution % Inbound Phase 2	0%	0%	22%	8%	0%	0%	0%	0%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 2	0%	0%	0%	0%	0%	0%	22%	0%	8%	0%	0%	0%
Driveway Enter "1" Yes, or "0" No Phase 2	1	1	1	1	1	1	1	1	1	1	1	1
Project Trip Volume Inbound - Phase 1	0	0	6	2	0	0	0	0	0	0	0	0
Project Trip Volume Outbound - Phase 1	0	0	0	0	0	0	16	0	6	0	0	0
Project Trip Volume Total - Phase 1	0	0	6	2	0	0	16	0	6	0	0	0
Project Trip Volume Inbound - Phase 2	0	0	6	2	0	0	0	0	0	0	0	0
Project Trip Volume Outbound - Phase 2	0	0	0	0	0	0	16	0	6	0	0	0
Project Trip Volume Total - Phase 2	0	0	6	2	0	0	16	0	6	0	0	0
Growth Factor Period 1	0.000	1.203	1.000	1.000	1.203	0.000	1.000	0.000	1.000	0.000	0.000	0.000
Growth Factor Period 2	0.000	3.032	1.000	1.000	3.032	0.000	1.000	0.000	1.000	0.000	0.000	0.000
Future Background Volume - Period 1		41	0	0	19		0		0			
Future Background Volume - Period 2		103	0	0	49		0		0			
Other Trip Assignment AM Period 1												
Other Trip Assignment AM Period 2												
Total Future Volume - Period 1		41	6	2	19		16		6			
Total Future Volume - Period 2		103	6	2	49		16		6			

PM Condition												
Description	Eastbound			Westbound			Northbound			Southbound		
	L	TH	R	L	TH	R	L	TH	R	L	TH	R
Existing Volumes		21			61							
Seasonally Adjusted base volumes	0	21	0	0	61	0	0	0	0	0	0	0
Trip Distribution % Inbound Phase 1	0%	0%	27%	3%	0%	0%	0%	0%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 1	0%	0%	0%	0%	0%	0%	27%	0%	3%	0%	0%	0%
Trip Distribution % Inbound Phase 2	0%	0%	27%	3%	0%	0%	0%	0%	0%	0%	0%	0%
Trip Distribution % Outbound Phase 2	0%	0%	0%	0%	0%	0%	27%	0%	3%	0%	0%	0%
Project Trip Volume Inbound - Phase 1	0	0	23	3	0	0	0	0	0	0	0	0
Project Trip Volume Outbound - Phase 1	0	0	0	0	0	0	13	0	1	0	0	0
Project Trip Volume Total - Phase 1	0	0	23	3	0	0	13	0	1	0	0	0
Project Trip Volume Inbound - Phase 2	0	0	23	3	0	0	0	0	0	0	0	0
Project Trip Volume Outbound - Phase 2	0	0	0	0	0	0	13	0	1	0	0	0
Project Trip Volume Total - Phase 2	0	0	23	3	0	0	13	0	1	0	0	0
Growth Factor Period 1		1.203	1.000	1.000	1.203		1.000		1.000			
Growth Factor Period 2		3.032	1.000	1.000	3.032		1.000		1.000			
Future Background Volume - Period 1		25	0	0	73		0		0			
Future Background Volume - Period 2		64	0	0	185		0		0			
Other Trip Assignment AM Period 1												
Other Trip Assignment AM Period 2												
Total Future Volume - Period 1		25	23	3	73		13		1			
Total Future Volume - Period 2		64	23	3	185		13		1			

NOTES: